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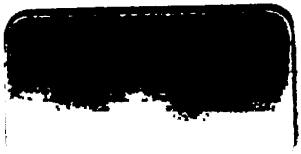

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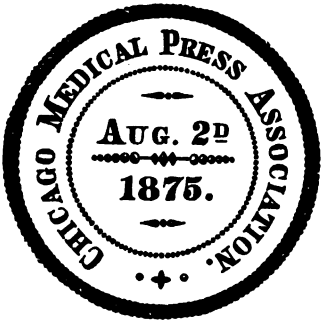

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To our Readers and Correspondents.

Beginning with Vol. XXXVII., July, 1878, the CHICAGO MEDICAL JOURNAL AND EXAMINER prints all records of length and weight in terms of the Metric System, and all records of temperature in degrees of the Centigrade Scale. The Metric System, legalized in the United States and Great Britain, is extensively or exclusively employed by other civilized nations, and has thus become an essential part of the international language of science. It is recommended for adoption to the profession in this country by the American Medical Association and other scientific bodies. To-day no physician can afford to be ignorant of its value, its simplicity and the meaning of its terms.

The subjoined tables and scales, which have been kindly prepared for us by Prof. W. S. Haines, will be continuously reproduced in subsequent numbers of this journal, for the ready reference of our readers and correspondents.

METRIC MEASURES OF LENGTH.

Millimeter	0.001 of a Meter		0.03937 inches.
Centimeter	0.01	" "	0.39370 "
Decimeter	0.1	" "	3.93707 "
Meter	**1.**	**Meter**	**39.37079** "
Decameter	10.	Meters	393.70790 "
Hectometer	100.	"	3937.07900 "
Kilometer	1000.	"	39370.79000 "

METRICAL WEIGHTS.

Milligram	0.001 of a Gram		0.015 grains.
Centigram	0.01	" "	0.154 "
Decigram	0.1	" "	1.543 "
Gram	**1.**	**Gram**	**15.432** "
Decagram	10.	Grams	154.323 "
Hectogram	100.	"	1543.234 "
Kilogram	1000.	"	15434.348 "

☞ The United States "nickel" five cent piece weighs five grams, and is two centimeters in diameter.

APPROXIMATE EQUIVALENT OF METRICAL WEIGHTS.

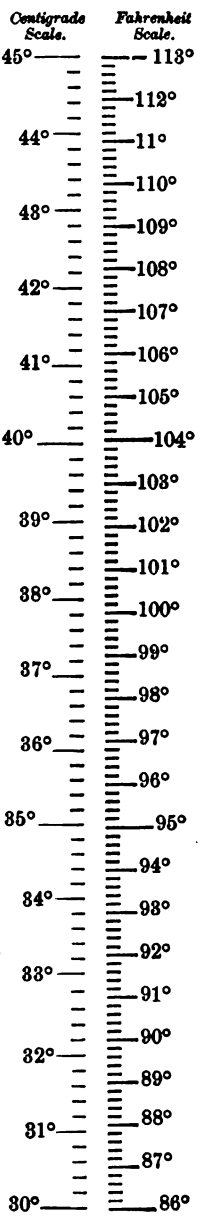
For Rapid Reference.

Milligrams.	*Grains.*	*Decigrams.*	*Grains.*
1 (written 0.001 or |001)*	1/65	1 (written 0.1 or |1)	1 1/2
2	1/32	2	3
3		3	4 1/2
4	1/16	4	6
5	1/13	5	7 1/2
6	1/11	6	9
7	1/9	7	11
8	1/8	8	12 1/2
9	1/7	9	14

Centigrams.	*Grains.*	*Grams.*	*Grains.*
1 (written 0.01 or |01)	1/6	1 (written 1. or 1|)	15
2	1/3	2	30
3	6/13	3	46
4	7/11	4	61
5	3/4	5	77
6	9/10	6	92
7	1	7	108
8	1 1/4	8	123
9	1 1/2	9	139

A Kilogram—2 1/5 lbs. Avoirdupois.

* The decimal *line* instead of points makes errors impossible.



METRIC FLUID MEASURES.

When using the metric system, fluids are preferably prescribed by weight, employing the gram, its multiples and subdivisions, just the same as with solids, thus avoiding the errors due to refraction, adhesion, and inaccurate measuring vessels. For practical purposes four grams of water may be regarded as equivalent to a fluid drachm of that liquid, and the same may be considered true of tinctures and infusions; syrups, on the average, are about one-third heavier than water, so that a fluid ounce of a syrup will be approximately represented by 43 grams.

If preferred, however, fluids may be prescribed by volume in the metric, just as in the present system, using for that purpose the *Cubic Centimeter*, that is, a volume represented by a cube all of whose sides measure one centimeter. An ordinary back-gammon die is usually about this size. One cubic centimeter (written 1 C. C.) — 16.231 minims. It is approximately regarded as one fourth of a fluid drachm.

APPROXIMATE EQUIVALENTS OF CUBIC CENTIMETER.

0.001 C. C.	—	1/60	minim.
0.01 "	—	1/6	"
0.1 "	—	1 1/2	"
1. C. C.	—	15	minim.
4. "	—	1	fluid drachm.
16. "	—	4	fluid drachms.
32. "	—	1	ounce.

1000 C. C. (usually known as a **Liter**) is a trifle more than one quart, wine measure.

The following prescription—

R: Potassii bromidi, ℥i.
Elixir aurantii, fl., ℥viij.
M.

Would, in metric terms, be written:

Potassic bromide, 32
Orange elixir, 250
Mix.

Original Communications.

ARTICLE I.

ONE HUNDRED AND SIXTY-THREE CASES OF FRACTURE OF THE NECK OF THE FEMUR. COLLECTED AND REPORTED BY H. WARDNER, M.D., CAIRO, ILLS., Chairman of the Committee on Surgery, Southern Illinois Medical Association.

Fracture of the neck of the femur is a subject of special interest to all surgeons who have had cases under treatment. Having had my attention called to this subject, I addressed a circular to quite a large number of the older practitioners, asking for reports of such cases as may have come under their observation.

In response I received reports, more or less in detail, of 163 cases which are embodied in the following tabulated statement. One hundred and three of these cases are reported as having occurred within the capsule, sixteen as being both intra and extra capsular, thirty-six as extra capsular, one as a separation of the epiphysis, and seven as uncertain.

Name of Surgeon.	No. of Patient.	Sex.	Age when it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, Etc., Etc.	RESULT. Union or Non-Union, Ligamentous or Bony. Amount of Shortening. Degree of Usefulness.
P. A. Allaire.....	1	F.	97	1873.	Simple.	R.	Intra.	No appliance used.	Got up very well, and lived to 101 years.
P. A. Allaire.....	2	F.	86	1875.	Simple.	L.	Intra.	No appliance used.	Died of exhaustion in 8 days.
P. A. Allaire.....	3	F.	75	1876.	Simple.	L.	Intra.	No appliance used.	Died of exhaustion in 30 days.
A. T. Bartlett.....	4	F.	57	Dec. 2d, 1867.	Simple, obscure.	R.	Intra.	Seen soon after accident. Hodgen's splint.	Ligamentous union. 1.2 Cm. shortening.
S. C. Plummer.....	5	F.	65	Feb. 20th, 1875.	Simple. Transverse.	R.	Intra.	15 hours after injury. Truesdale's fracture-bed.	Bony union. No shortening.
J. H. Reeder.....	6	F.	58	1872.	Simple.	R.	Intra.	4 to 6 weeks in double inclined plane with extension by weight from knee, followed by reclining chair, and no restraint.	Union ligamentous *probably*. Limb quite useful. 5 Cm. shortening.
H. Culbertson.....	7	F.	73	July 5th, 1858.	Simple.	L.	Intra.	Simply supported on pillows.	Non-union. New joint formed. Used crutch. Died in 1866, of senile gangrene. Shortening 3.7 Cm.
S. C. Plummer.....	8	F.	77	Feb. 5th, 1871.	Simple.	R.	Intra.	Truesdale's fracture-bed.	Non-union. Died in 21 days of old age.
S. C. Plummer.....	9	F.	78	Aug. 15th 1873.	Simple. Transverse. Oblique.	R.	Intra.	Truesdale's fracture-bed.	Perfect union in 42 days, but patient died of old age and confinement in treatment.
H. Wardner.....	10	M.	65	January, 1859.	Simple.	R.	Intra.	Seen soon after injury. McIntyre's splint, and double inclined plane.	Union probably ligamentous. Walked with cane after two years. Shortening not determined.
H. Wardner.....	11	F.	69	March 14 1872.	Simple.	R.	Intra.	Seen at once. Extension by weight and pulley.	Non-union, or possibly ligamentous. Uses crutch. About 5 Cm. shortening.
H. Wardner.....	12	M.	16	1876.	Simple.	R.	Intra.	Hodgen's splint, and plaster Paris.	Bony union. Walks with cane. Shortening but little, and not determined.
L. Dyer.....	13	F.	60		Simple.	—	Intra.	Physick's modified splint.	Non or ligamentous union. Walks with crutch. 5 Cm. short.
P. A. Allaire.....	14	F.	62	1872.	Simple.	R.	Intra.	No appliance used.	Limb useful with a cane.

Name of Surgeon.	No. of Patient.	Sex.	Age when it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-Union, Ligamentous or Bony. Amount of Shortening. Degree of usefulness.
A. E. Bell	15	F.	62	Jan. 29th, 1867.	Simple.	R.	Intra, with free laceration of ligament.	No splints. Simple dressings.	Non-union. False joint. 3.1 Cm. shortening.
D. A. K. Steele	16	F.		April 22d, 1876.	Simple.	L.	Intra.	Seen night following the injury. Buck's apparatus with weight and pulley.	Non-union. Eversion Limb nearly useless. Spindle-celled sarcoma removed from over tensor vaginæ femoris 18 months after. About 2.5 Cm. short.
M. M. Goodman	17	F.	80	1871.	Simple.	R.	Intra.	No dressings except liniments.	Non-union. Limb about useless. But little shortening.
Saml. H. Birney	18	F.	56	July 8th, 1872.	Simple. Transverse.	R.	Intra.	Seen 3 hours after injury. Double inclined plane of Daniel's fracture-bed.	Union bony. Good use of limb. 2.5 Cm. short.
L. Dyer	19	M.	50		Simple.	—	Intra.	Physick's splint modified. Extension and counter-extension.	Union ligamentous *probably*. Walks with crutch. 5 Cm. short.
L. H. Stroud	20	F.	50	Oct. 1876.	Simple.	L.	Intra.	Supposed to have been a contusion. No dressing used.	Non-union. But little use.
G. Callen	21	F.	30	1865.	Simple.	R.	Intra.	Bathed with camphor!	Supposed to be ligamentous. Helpless without crutches. 5 Cm. short.
Chas. Richards	22	F.	84	1866.	Simple. Transverse.	R.	Intra.	Seen 4 hours after injury. Long splint and bandage.	Union ligamentous probably. Walked with crutches. Shortening not measured.
Chas. Richards	23	F.	61	1870.	Simple. Transverse.	L.	Intra.	Seen 2 hours after injury. Long splint and bandage.	Union ligamentous (?) No use of limb. 7.6 Cm. short.
Chas. Richards, and J. Casey	24	F.	58	1877.	Simple. Transverse.	L.	Intra.	Seen 2 hours after injury. Long splint and bandage.	Had no use of limb to time of death, 3 months later. 5 Cm. shortening.
M. A. McClelland	25	F.	60	1871.	Simple. Transverse.	R.	Intra (probably).	Was first seen by a "doctor" who pronounced it a sprain. No dressing whatever.	Union ligamentous. Walks with crutch. Shortening not determined.
J. H. Reeder	26	F.	65	1870.	Simple. Transverse.	R.	Intra.	Double-inclined plane 4 to 6 with weight extension from knee. Afterward reclining chair and no restraint.	Union ligamentous, probably. Limb useful. 3.7 Cm. short.
C. H. Mastin	27	M.	64	1875.	Simple.	L.	Intra.	Seen at once. Amesbury's double inclined plane.	Union ligamentous. Walks very well.

Name of Surgeon.	No. of Patient.	Sex.	Age when it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-union, Ligamentous or Bony. Amount of Shortening. Degree of Usefulness.
W. Meacher	28	M.	70	1872.	Simple.	R.	Intra.	Placed on pillows.	Non-union (probably ligamentous). Could walk with cane.
W. Meacher.....	29	F.	60	1871.	Simple.	R.	Intra.	Placed on pillows.	Non-union. Could walk with cane. 1.2 Cm. shortening.
W. Meacher	30	F.	25	1875.	Simple.	L.	Intra.	Extension by weight and pulley.	Union ligamentous. Walks with cane. 1.2 Cm. shortening.
D. B. Trimble.....	31	M.	80	1858.	Simple.	L.	Intra.	Caused by lifting. Lived 5 months.	Non-union.
D. B. Trimble.....	32	M.	75 to 80	1860.	Simple.	R.	Intra.	Jumped from second story window. Lived 6 weeks.	Non-union.
D. B. Trimble.....	33	F.	90	1863.	Simple.	—	Intra.	Caused by pulling open a bureau drawer.	Died in 2 days.
E. R. Willard	34	M.	35	Jan. 5th, 1874.	Supposed impacted.	L.	Intra.	Long splint.	Union probably ligamentous. Usefulness good. 3.7 Cm. short.
E. R. Willard.....	35	F.	32	Sept. 28, 1874.	Simple.	L.	Intra.	Long splint.	Union probably ligamentous. Good use. 1.2 Cm. short.
Chas. T. Parkes.....	36	F.	72	October, 1874.	Simple. Oblique.	R.	Intra, probably.	Seen after 4 hours. Double inclined plane 2 weeks. Confinement not insisted on.	Union ligamentous. Walks with crutch and cane. 3.7 Cm. short.
J. H. Ledlie	37	M.	74	April, 1868.	Simple.	L.	Intra.	No dressing.	Died in a few days. Never rallied from shock.
A. G. Williams.....	38	M.	61	Aug. 1st, 1871.	Simple.	L.	Intra.	Seen soon after accident. Long splint and extension.	Union ligamentous. Limb nearly useless. 2.4 Cm. short. Eversion.
R. G Bogue	39	F.	90	Mch. 7th, 1876.	Simple.	L.	Intra.	Limb flexed and laid over padded blanket under knee.	Died of exhaustion April 2d, 1876.
R. G. Bogue	40	F.	92	Dec. 4th, 1876.	Simple.	L.	Intra.	Limb flexed with a pillow under knee.	Died of exhaustion Jan. 2, 1877.
F. L. Wadsworth ..	41	F.	75	N'v. 30th, 1877.	Simple.	R.	Intra.	Limb flexed with a pillow under knee.	Non-union. Uses crutches since the sixth week.
Henry Tomboken.....	42	F.	82	Jan. 10th, 1878.	Simple.	R.	Intra.	Same treatment as above.	Non-union. Not useful; but not painful.
R. W. Crothers.....	43	M.	80	Febru'ry, 1876.	Simple.	L.	Intra.	Same as above.	Non-union Limb useless. Died the following year.

Name of Surgeon.	No. of Patient.	Sex.	Age when it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by surgeon, etc., etc.	RESULT. Union or Non-Union, Ligamentous or Bony. Amount of Shortening. Degree of usefulness.
R. L. Moore	44	F.	81	Sept. 15, 1874.	Comminuted.	L.	Intra.	Seen 4 days after injury. Extension by weight and pulley, and double inclined plane.	Death on 18th day from exhaustion.
R. L. Moore	45	F.	69	Oct. 15, 1874.	Simple.	L.	Intra.	Seen ten days after occurrence. Extension by weight and pulley, and sole leather splint.	Union ligamentous. Always used crutches. Shortening not known.
R. L Moore	46	F.	73	June 5, 1875.	Impacted.	R.	Intra.	Seen soon after accident. Double inclined plane with weight and pulley.	Died on 54th day, from septicæmia. Autopsy verified diagnosis.
M. L. Hall, reported by G. W. Jones	47	F.	76	Feb. 28, 1877.	Impacted.	R.	Intra.	No treatment allowed by patient.	Ligamentous union. Some usefulness. 3 Cm. short.
A. C. Rankin	48	M.	81	Jan. 1st, 1874.	Simple.	R.	Intra.	Long straight splint was used 8 weeks.	Non-union. Limb useless and painful. Died at end of one year.
Wm. T. Kirk	49	F.	63	March 5, 1873.	Simple.	L.	Intra.	Seen early. On 3d day placed limb in fracture box with side splints extending to axilla and perineum, with extension. Kept in bed three months.	Union bony. Walked without crutch or cane after 18 months. 2.4 Cm. short.
J. H. Ledlie	50	F.	58	Nov., 1858.	Simple.	L.	Intra.	Seen immediately. Double inclined plane and pillows.	Union ligamentous. Used crutches. 7.6 Cm. short.
R. Boal and J. C. Frye	51	M.	30	Dec. 12, 1868.	Simple.	L.	Intra.	No dressings.	Probably bony. Walks with cane. 3.1 Cm. short.
Wm. M. Chambers	52	F.	71	1855.	Simple.	L.	Intra.	Sir Astley Cooper's method. No dressings.	Non-union. Walked with cane or crutch. 5 Cm. short.
Wm. M. Chambers	53	F.	69½	Feb. 23, 1878.	Simple.	L.	Intra.	No dressings.	Non-union. Walking with crutches. Shortening unknown.
No Surgeon	54	F.	71	1873.	Simple.	L.	Intra.	No treatment.	Non-union. 5 Cm. short.
H. W. Kendall	55	F.	69	Sept., 1866.	Simple.	R.	Intra.	Cause, tripped on carpet. Weight and pulley, 3 months in recumbent position. [See note.]	Limb quite useful. Walks with cane. Union Ligamentous. 6.3 Cm. shortening.
H. W. Kendall	56	F.	43	August, 1877.	Simple.	R.	Intra.	Weight, pulley and long splint.	Unable to walk without crutches. Non-union. 2.5 Cm. short.

Name of Surgeon.	No. of Patient.	Sex.	Age when it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-union, Ligamentous or Bony. Amount of Shortening, Degree of Usefulness.
S. L. Cheaney	57	F.	98	Sept. 2, 1870.	Simple.	R.	Intra. (?)	Sand bags and rest.	Was able to get about with a ligamentous union.
Wm. B. Alley	58	M.	78	June, 1861.	Simple.	L.	Intra.	Seen after a few days. No dressings.	Union ligamentous. Walked only on crutches. 5 Cm. short.
Wm. B. Alley	59	F.	82	Sept., 1863.	Simple.	L.	Intra.	Seen at once. Hagedorn's (?) apparatus.	Union ligamentous. Used crutches 7 years before death. 5 Cm. shortening.
Wm. B. Alley.....	60	M.	75	Dec., 1871.	Impacted.	R.	Intra.	Same as above.	Union supposed to be ligamentous. 6.3 Cm. short.
Theodore Meyer	61	F.	45	May 4, 1849.	Simple.	R.	Intra.	Seen early. Spica bandage with starch and glue.	Probably union (ligamentous?). Used crutches last heard from; but doing well.
C. K. Hendee.....	62	F.	59	Sept., 1869.	Simple.	R.	Intra.	Seen 10 days after injury. Splint with extension and counter-extension.	Union ligamentous. Can walk with cane. 3.7 Cm. short.
C. K. Hendee.....	63	F.	68	Feb., 1875.	Simple.	R.	Intra.	Seen 3 months after injury. No dressing.	Union ligamentous. Uses crutch. 7.6 Cm. short.
C. K. Hendee.....	64	M.	62	Jan'y, 1877.	Simple.	R.	Intra.	No dressing except straw bolsters to keep leg from twisting.	Union ligamentous. Walks with cane. 5 Cm. short.
R. Roskoten.....	65	F.	70	1868.	Simple.	R.	Intra.	Seen after 8 weeks. Was first treated for dislocation by attending physician. No dressing when seen by me.	Non-union.
Kingkade, rep'ted by Dr. D. O. Morrell..	66	M.	75	Sept. 14, 1877.	Simple.	R.	Intra.	Seen 6 weeks after injury. Hodgen's extension splint and plast. Paris.	Non-union.
A S. Munsell, rep'ted by F. A. Emmons..	67	F.	80	Jan 25th, 1875.	Simple.	R.	Intra.	Seen 2 weeks after injury. Extension.	Non-union. Cannot move limb. 1.8 Cm. short.
Chas. T. Parkes.....	68	F.	76	Sept., 1877.	Simple.	L.	Intra.	Seen within 24 hours. No special dressings. Arranged on pillows.	Non-union probably. Can move limb. No pain. Bed ridden from old age.
R. W. Crothers	69	F.	60	Jan'y, 1859.	Simple.	R.	Intra.	Seen in 3 hours. Bandage, extension and wet paste board from knee to crest of ilium.	Ligamentous union. Walks with cane or crutch. Shortening not perceptible.
R. W. Crothers	70	F.	63	Jan'y, 1866.	Simple.	L.	Intra.	Seen within half an hour. Dressing same as above.	Union ligamentous. Walks with crutch or cane. Shorten'g not obsrvd.

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I. N. Danforth.....	71	M.	70	1865.	Simple.	R.	Intra.	Patient was a physician, and a very impatient patient. Starch dressing only.	Osseous union. Walks with cane. 2.4 Cm. shortening.
I. N. Danforth.....	72	F.	60	1864.	Simple.	R.	Intra.	Elevation foot of bed. Sand-bags, weight and pulley.	Osseous union. Walks with a little limp. 1.8 Cm. shortening.
C. H. Mastin.....	73	F.	8	———	Simple.	R.	Intra. Supposed separation of Epiphysis.	Seen several months after union. Kape's apparatus for fracture of hip.	Walks well with splint. 2.7 Cm. shortening.
C. H. Mastin.....	74	F.	60	Dec., 1877.	Simple.	L.	Intra.	Inclined plane and weight for several weeks. Rest in bed.	Ligamentous union. Walks with crutches.
C. H. Mastin.....	75	F.	58	July, 1876	Simple.	L.	Intra.	15 months after occurrence applied Agnew's splint for coxalgia, with perineal band.	Cannot walk without apparatus. Does very well with it. 2.4 Cm. shortening.
Wm. B. Alley.....	76	F.	76	Sept. 1876	Simple.	L.	Intra.	No dressing.	Died in 10 days of pneumonia.
J. L. Miller, reported by J. S. Whitmire..	77	F.	50	Dec., 1852.	Simple.	——	Intra.	Suppose simplest kind, as the surgeon was too penurious to procure proper apparatus.	No union whatever. Never walked without crutches. 10 Cm. shortening.
E. L. Marshall.....	78	F.	62	October, 1857.	Simple.	R.	Intra.	Seen 4th day. Daniel's fracture-bed.	Union ligamentous (?) Nearly useless. 3.7 Cm. short.
E. L. Marshall.....	79	F.	61	Aug. 30, 1875.	Impacted.	R.	Intra.	Rest, and sand bags.	Ligamentous perhaps. Walks with ease with cane. Slight shortening.
D. S. Booth.....	80	F.	55	1865.	Simple.	L.	Intra.	Foot of bed raised 2½ inches. Extension by weights. Sand bag support.	Union Ligamentous. Amount of shortening undetermined.
D. S. Booth.....	81	F.	60	1872.	Simple.	L.	Intra.	Same as above.	Same as above.
A. J. Mead.....	82	F.	68	1863.	Simple.	R.	Intra.	Seen 3 months after accident. No dressings.	Union Ligamentous. But little use. 3.7 Cm. short.
M. J. Roeschlaub.....	83	M.	42	June 19, 1851.	Simple.	R.	Intra?	Double inclined plane after Dupuytren and Richards. Seen within an hour.	Union bony. Useful. 0.6 Cm. short.
S. L. Cheaney.....	84	F.	56	Aug. 1st, 1867.	Simple.	R.	Intra?	Long spilnt with heavy weights.	Union bony. Quite useful after six months. Shortening undetermined.

Name of Surgeon.	No. of Patient.	Sex.	Age when it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-Union, Ligamentous or Bony. Amount of Shortening. Degree of Usefulness.
Allin & Sams	85	F.	55	Sept., 1855.	Simple.	L.	Intra.	Extension at first, but discontinued 3d day, too painful.	Union ligamentous probably. Limb useless. 1.8 Cm. short, and 4 years after 3.7 Cm. short.
John Schmidt	86	M.	62	1874.	Simple.	L.	Intra.	No dressing. Recumbent posture.	Limb quite useful with raised heel. 3.7 Cm. short.
W. H. H. King	87	F.	61	July, 1874.	Simple.	L.	Intra.	No dressing. Recumbent position.	Union ligamentous. Walks with crutch and cane.
E. Gaylord	88	F.	67	Jan. 25, 1870.	Impacted.	L.	Intra.	No dressing. Recumbency.	Union bony. Slight eversion. 2.4 Cm. short.
E. Gaylord	89	F.	84	Oct. 31, 1874.	Impacted.	L.	Intra.	No dressing. Recumbency.	Union bony. Some lameness. 3.7 inches short.
Thomas Whitten	90	F.	74	Dec. 20, 1876.	Simple.	L.	Intra.	Seen one week after accident. Extension with long splint.	Union ligamentous. Usefulness much impaired. 3.7 Cm. short.
W. J. Chenoweth	91	M.	70	Nov., 1873.	Simple.	R.	Intra.	Long splint and roller.	Non-union. Patient delirious and would not endure dressings.
H. C. Howard	92	F.	52		Simple.	R.	Intra.	Extension and rest.	No union.
Chas. C. F. Gay	93	F.	60	1871.	Simple.	L.	Intra.	Fracture and shortening, only recognized after some weeks, after tripping on the carpet. No dressings used.	Non-union. Shortening 6.3 Cm.
Chas. C. F. Gay	94	M.	52	1875.	Simple.	L.	Intra.	Extension.	Non-union. Shortening 1.8 Cm. Subsequently died of cancer of stomach.
Chas. C. F. Gay	95	M.	67	March 5, 1870.	Simple.	L.	Intra.	Extension by weight and pulley.	Non-union. 1.8 Cm shortening.
Chas. C. F. Gay	96	M.	32	June 8, 1870.	Simple.	L.	Intra.	Extension by weight and pulley.	Non-union. Shortening 2.5 Cm.
Chas. C. F. Gay	97	M.	61	1875.	Simple.	L.	Intra.	Fell striking on hip. No dressings.	Non-union. 5 Cm. shortening.
Chas. C. F. Gay	98	M.	64	October, 1876.	Simple.	R.	Intra.	Large man, fell striking on left hip. No dressings.	Non-union. 4.7 Cm. short. Died 9 months after injury.
H. T Montgomery	99	F.	70	1871.	Simple.	L.	Intra.	Foot of bed 9 inches high. 12 to 16 pounds over pulleys, two parallel.	Union. Walked in 18 months. 1.8 Cm. short. No splint used.

Name of Surgeon.	No. of Patient.	Sex.	Age When It Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-union, Ligamentous or Bony. Amount of Shortening. Degree of Usefulness.
Abner Hard.....	100	M.	70	1855.	Simple. Transverse.	R.	Intra.	Seen immediately after injury. First used long splint, but soon changed to pulley and weight and continued to recovery.	Ligamentous union probably. Little shortening. Patient first went on crutches, but finally with cane. Useful leg.
Abner Hard.	101	F.	63	1858,	Simple. Transverse.	R.	Intra.	Seen soon after fracture occurred. Treated by pulley and weight till recovery.	Suppose ligamentous union. Little shortening. After first year was able to go without crutch or cane. Useful limb.
Abner Hard.....	102	F.	64	Dec. 1, 1866.	Simple. Transverse.	R.	Intra.	Seen soon after injury. Treated by pulley and weight.	Suppose ligamentous union. Little shortening. Went first with crutch and then with cane. Useful limb.
Abner Hard.....	103	F.	78	Sept. 14, 1877.	Simple. Transverse.	R.	Intra.	Seen soon after injury. Pulley and weight and subsequently by starch bandage.	Do not know as to union. Patient is using crutches and improving steadily. Little shortening.
H. Wardner.....	104	F.	56	1877.	Simple.	R.	Intra and perhaps partly Extra	Hodgen's splint and plaster Paris.	Union seems to be bony. Walks now with crutch. 0.6 Cm. short. A little eversion.
E. L. Marshall.....	105	F.	65	July 5, 1860.	Simple. Oblique.	L.	Intra and Extra.	Seen seventh day. Daniel's fracture bed.	Probably bony. Walked with cane. 5 Cm. short.
Chas. T. Parkes.....	106	F.	45	Nov., 1876.	Simple. Oblique.	R.	Intra and Extra.	Seen within 24 hours. Extension by weight and pulley and long external splint.	Good bony union. Useful limb. 2.5 Cm. or more short.
Chas. T. Parkes.....	107	M.	42	Febru'ry, 1878.	Impacted.	R.	Intra and Extra.	Weight and pulley and sand bags.	Bony union. Good limb; *some limp.* 1.8 Cm. short.
Chas. T. Parkes, Cook Co. Hospital.....	108	M.	40	1877.	Simple. Oblique.	L.	Intra and Extra.	Weight and pulley.	Bony union. Good limb. 0.6 Cm. short.
Chas. T. Parkes.....	109	M.	65	March, 1875.	Simple. Oblique.	L.	Intra and Extra.	Seen within 24 hours. Weight and pulley and long external splint.	Union bony. Useful but lame. 2.1 Cm. short.
S. C. Plummer and G. G. Craig.....	110	M.	49	March, 1871.	Simple. Oblique.	R.	Extra and Intra.	24 hours after injury. Truesdale's fracture bed.	Bony union. Perfect use. Longer than opposite limb.
I. N. Danforth.....	111	F.	68	1875.	Simple.	L.	Oblique, Extra and Intra.	Weight and pulley extension. Blankets and splints.	Union not certain; believed to be bony. Walks well but complains of weakness. 2.5 Cm. shortening.

Name of Surgeon.	No of Patient.	Sex.	Age When it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-Union, Ligamentous or Bony. Amount of Shortening. Degree of Usefulness.
F. M. Agnew	112	F.	70	May, 1869.	Simple.	R.	Extra and perhaps Intra.	Straight splint, perfect rest.	Union bony. Walks very well with a cane.
C Richards	113	M.	22	1874.	Simple. Oblique.	R.	Extra and Intra.	Sole leather splint and weight for extension.	Bony union. Motion impaired. Fair use. No shortening.
R. P. Lane, reported by G. W. Rohr	114	F.	54	1877.	Simple. Oblique.	R.	Extra and Intra.	Weight and pulley.	Union bony. 3.1 Cm. short.
Various Army Surgeons	115	M.	40	July 19, 1864.	Compound.	R.	Extra and Intra.	Seen at once. Laid on well side. Cooling lotions. No splints. See note.	Bony union. Usefulness impaired. 3.1 Cm. short.
H. C. Howard	116	F.	58	———	Simple.	L.	Extra and Intra.	Extension, immobility, rest.	Good recovery. 1.8 Cm. short.
H. C. Howard	117	F.	45	———	Impacted.	R.	Not certain.	Splints, immobility. No extension.	3.7 short.
Joseph Teft	118	M.	75	1855.	Oblique.	R.	Extra and Intra.	No treatment.	Non-union.
D. Prince	119	M.	35	April 8, 1875.	Simple, Impacted.	R.	Extra and Intra.	Hodgen's splint. Seen 20 days after injury.	Death, 25 weeks after injury, from drinking liniment containing sulphuric acid, while in delirium tremens.
Drs. Howell, reported by Abner Hard	120	M.	68	1876.	Simple. Transverse	R.	Extra.	No dressing. Fracture was not detected for several months; supposed to be a contusion.	Non-union. Shortening 6.3 Cm. No use of limb. Moves by use of crutches.
D. A. K. Steele	121	M.	——	April 25, 1877.	Impacted.	L.	Extra.	Seen 3 days after injury. Hodgen's splint.	Bony union. Very useful limb. No lameness. 0.6 Cm. short.
Saml. H. Birney	122	M.	64	Jan. 12, 1874.	Comminuted.	R.	Extra.	6 hours after fracture. Recumbency, extension by weight and pulley.	Bony union. Eversion. Walks well with cane. 3.7 Cm. short.
Saml. H. Birney	123	M.	3	Jan. 2, 1878.	Comminuted.	R.	Extra.	Seen 5 days after injury. Double, straight thigh splints. Extension by weight and pulley.	Bony union. Began to walk at end of 5 weeks. Not over 1.2 Cm. short.
Z. C. McElroy	124	F.	55	1855.	Simple. Obscure.	L.	Extra.	No apparatus. Placed on pillows.	No union by bone. Walked on crutches 15 years, and died of pneumonia. 5 Cm. short.
J. Stonemetz	125	M.	12	1862.	Simple. Transverse.	L.	Extra.	Liston's splint.	Bony union. Perfect use. No perceptible shortening.

Name of Surgeon.	No. of Patient.	Sex.	Age When it Occurred.	Date of Occurrence	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-Union, Ligamentous or Bony. Amount of Shortening, Degree of Usefulness.
Chas. Reber	126	F.	65	1872.	Simple.	L.	Extra.	Seen 24 hours after accident. Extension by weight and pulley.	Union ligamentous. Can walk with cane or crutch. 2.5 Cm. shortening.
W. Meacher	127	M.	60	1873.	Simple.	L.	Extra.	Sand bags. Extension by weight and pulley.	Good recovery. Walks well. 0.6 Cm. short.
J. R. Wells	128	F.	60	Dec. 19, 1874.	Simple.	L.	Extra.	Truesdale's fracture bed.	Union bony. Perfect use. No perceptible shortening.
H. Culbertson	129	M.	27	July 10, 1854.	Simple, with dislocation of ankle same side, and simple fracture of both bones of left leg.	R.	Extra. Note.	Double inclined plane. Extension could not be borne. Supported by pillows.	Union bony. Limb useful. 6.3 Cm. short.
R. Roskoten	130	M.	51	Jan. 14, 1858.	Simple, with contusions.	L.	Extra.	Dzondis' apparatus, improved by Hagedorn, for extension, and the splint of Burminghasen to support fracture in the proper position.	Bony union. Good use of limb. 1.8 Cm. short.
Fred. Brendel	131	M.	44	Nov. 22, 1869.	Simple.	R.	Extra.	Straight splint and extension.	Union bony. Tolerably good use of leg, which was shortened by a previous fracture. Total shortening 3.7 Cm.
A. J. Mead	132	F.	70	1856.	Simple.	L.	Extra.	Seen at end of 4 months. No dressings.	Union ligamentous. Never walked without crutch. 5 Cm. shortening.
J. Stout	133	F.	70	March 19, 1869.	Simple.	R.	Extra.	Extension by weight.	Union bony. Limb useful. 1.8 Cm. shortening.
C. B. Reed	134	M.	70	Sept. 28, 1866.	Simple.	R.	Extra.	Seen 3 hours after injury. Limb supported by cushions.	Ligamentous union. Usefulness much impaired. 5 Cm. shortening.
Chas. Reber	135	F.	63	1869.	Simple.	R.	Extra.	Seen in 6 hours. Extension by weight and pulley.	Ligamentous union. Walks with cane or crutch. 2.5 Cm. shortening.
W. J. Chenoweth	136	F.	19	Aug. 28, 1877.	Impacted.	R.	Extra.	Long splint and roller.	Good union. No appreciable shortening.
W. J. Chochran	137	M.	52	January, 1876.	Impacted.	L.	Extra.	No displacement. Long splint and rest.	Bony union. Slight eversion of foot. 1.2 Cm. short. Walks with cane.
J. H. Ledlie	138	M.	20	April 10, 1862.	Compound, G. S. W.	L.	Extra.	Seen one month after accident. Extension with weight and pulley.	Union bony; joint anchylosed. Good use. 3.7 Cm. short.

Name of Surgeon.	No. of Patient.	Sex.	Age When it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-Union, Ligamentous or Bony. Amount of Shortening. Degree of Usefulness.
T. M. Sams	139	F.	36	Dec., 1849.	Impacted.	R.	Extra.	Long splint and extension.	Good union; bony. Useful but imperfect. 1.2 Cm. short.
F. B. Haller	140	M.	70	1852.	Simple.	R.	Extra. Anatomical neck. (?)	Seen 4 hours after injury. Straight splint.	*Died* 3rd day from internal injuries.
C. H. Richings, reported by G. W. Rhor.	141	F.	55	1872.	Simple. Transverse.	L.	Extra.	Long straight splint.	Union bony. No perceptible shortening.
B. K. Lucas	142	M.	71	Jan. 9, 1877.	Simple.	R.	Extra.	Extension by weight and pulley at once.	Bony union. Can walk long distance. 1.2 Cm. short.
Josiah Whitnel	143	M.	43	1858.	Simple.	L.	Extra.	Seen first day. Used Day's splint	Bony union. 1.2 Cm. short.
Josiah Whitnel	144	M.	70	1866.	Simple.	R.	Extra.	Seen 2 months after injury. No dressings used.	Union ligamentous. 7.5 Cm. short.
Josiah Whitnel	145	M.	69	1866.	Simple.	R.	Extra.	Seen first day. Used Day's splint.	Non-union.
Wm. M. Chambers and A. Evans	146	M.	40	1850.	Simple.	L.	Extra.	Liston's splint.	Non-union (ligamentous?). Walked with cane. 3.7 Cm. short.
Wm. H. H. King	147	F.	58	August 2, 1870.	Simple.	R.	Extra.	Seen in a few hours. Dressed with weight and pulley.	Union bony. 1.8 Cm. short.
Drs. Monroe and Speed	148	M.	35	May 29, 1872.	Simple. Transverse.	R.	Extra.	Seen at once. Dressed in Day's splint (?) with extension and counter-extension.	Union supposed to be bony. Patient *died* in six months of phthisis. Shortening 1.2 Cm.
Chas. C. F. Gay	149	M.	27	May, 1874.	Simple and comp'nd fracture of tibia	L.	Extra.	Fell from a boat. Extension simply.	Non-union. 1.8 Cm. short.
Chas. C. F. Gay	150	M.	55	October, 1874.	Simple.	L.	Extra.	Extension.	Bony union. 5 Cm. short. Walks with cane and high heel.
H. F. Montgomery	151	F.	25		Simple.	L.	Extra.	Long splint with screw extension.	United. 2.2 Cm. short.
Chas. C. F. Gay	152	F.	24	1877.	Simple.	R.	Cervix, part not stated.	No statement.	Non-union. Shortening 5 Cm. Toes everted. Limb much atrophied.
J. F. Stewart	153	F.	3	April 22, 1871.	Simple.	R.	Extra.	Seen at once. Applied simple straight splint.	Bony union. No perceptible shortening. Perfect use.
J. F. Stewart	154	M.	56	Feb. 17, 1873.	Simple.	R.	Extra.	Seen at once. Extension by weight and pulley.	Bony union. Almost perfect use. 1.2 Cm. short.
J. F. Stewart and J. Murphy	155	M.	64	July 12, 1875.	Simple.	R.	Extra.	Seen at once. Straight splint and extension.	Bony union. Usefulness much impaired, but improving. 3.1 Cm. short.

Name of Surgeon.	No. of Patient.	Sex.	Age When it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-Union, Ligamentous or Bony. Amount of Shortening. Degree of Usefulness.
Drs. Monroe and Speed.....	156	M.	9	June 18, 1876.	Simple. Transverse.	L.	Probably a separation of epiphysis.	Seen soon after accident. Physick's splint and junk bags.	Union bony. No apparent shortening. Usefulness perfect.
Edmund Andrews.....	157	M.	Ab't 60	Forgotten.	Simple.	R.	I do not know any way to make a decisive diagnosis on this point. Many cases are doubtless partly intra and partly extra capsular. I suppose those who got a bony union were probably *at least partly* extra capsular.	Side splint, adhesive straps, pulley and weight.	Apparently bony union. Able to walk well with cane.
Edmund Andrews.....	158	M.	Ab't 40	Forgotten.	Simple.	R.		Adhesive straps, pulley and weight.	Bony union. Good use.
Edmund Andrews.....	159	F.	36	Forgotten.	Impacted.	Forgotten.		Horizontal position only.	Bony union. Good use.
Edmund Andrews.....	160	F.	Ab't 60	———	Impacted.	L.		Horizontal position only.	Union doubtful. Imperfect use.
Edmund Andrews.....	161	M.	45	———	Simple.	Forgotten.		Adhesive straps, pulley and weight.	Bony union. Good use.
Edmund Andrews.....	162	M.	Ab't 35	———	Compound.	R.		Splints.	Bony union. Considerable use.
Edmund Andrews.....	163	M.	Ab't 38	———	Simple.	Forgotten.		Forgotten.	No union. Imperfect use.

DEAR DOCTOR: My records are imperfect on this subject. I send such as I am able to recall with distinctness. I distrust the precision of all attempts to diagnosticate extra from intra-capsular. In cases of old persons who fail of union, I generally presume the fracture is intra-capsular, but I doubt the certainty of the conclusion, even when corroborated by the other symptoms usually relied on to help out the inference.

The following table shows amount of shortening resulting from the different modes of treatment as reported:

MODE OF TREATMENT.	Total number of cases.	No. of cases in which the amount of shortening is given.	Maximum. Cm.	Minimum. Cm.	Average.	REMARKS.
No appliance used. Support on pillows..	48	21	10.	3.1	5.	Non-union 8, ligamentous 11, bony 21.
Extension by weight and pulley.....	42	34	6.3	.0	2.1	
Hodgen's modification of Smith's ant....	6	4	1.2	0.6	1.	
Truesdale's fracture bed.....	5	4	.0	.0		One longer than natural.
Daniels' fracture bed.....	3	3	5.	2.5	3.7	
Amesbury's double inclined plane.....	7	5	7.6	0.6	4.	
Straight splint, with extension after the manner of Physick.....	27	18	7.6	.0	2.	
Other apparatus of seven different kinds, but involving same principles as above	25	9	6.3	1.2	2.8	

Many eminent surgeons distrust accuracy of diagnosis in a majority of cases of this injury. The difficulty of correct diagnosis is very well illustrated in the case of Bergman vs. Volker, Superior court of Buffalo, N. Y., September term, 1876.

Plaintiff was sixty-one years old; was knocked into a gutter by a passing team, striking on left side, August 31st, 1875. Was lifted into a wagon and started home; stopped to see a doctor, who said it was only a bruise. At home, cried with pain in left hip when shoe and sock were removed. Four days later, called Dr. Walker, who diagnosticated and treated the injury as a bruise.

Dr. Gay saw the case 18th of May, 1876, made careful examination, and pronounced the case dislocation upon dorsum of ilium, and made what he supposed to be a reduction, but afterwards concluded the head of the bone had slipped into the sciatic notch.

Dr. Miner diagnosticated a fracture of the neck. Dr. T. F. Rochester ditto. Dr. James P. White diagnosticated fracture within capsular ligament. Dr. H. A. Hopkins diagnosticated dislocation into sciatic notch.

On March 22d, 1877, plaintiff committed suicide. A post mortem examination revealed the facts set forth in the following:

"This is to certify, that on the 22d day of March, 1877, we, the undersigned, made a post mortem examination of the left hip of Chas. Bergman, of this city. The head of the femur was in the acetabulum. There had been a fracture of the neck of the

Name of Surgeon.	No. of Patient.	Sex.	Age when it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by surgeon, etc., etc.	RESULT. Union or Non-Union, Ligamentous or Bony. Amount of Shortening. Degree of usefulness.
R. L. Moore	44	F.	81	Sept. 15, 1874.	Comminuted.	L.	Intra.	Seen 4 days after injury. Extension by weight and pulley, and double inclined plane.	Death on 18th day from exhaustion.
R. L. Moore.....	45	F.	69	Oct. 15, 1874.	Simple.	L.	Intra.	Seen ten days after occurrence. Extension by weight and pulley, and sole leather splint.	Union ligamentous. Always used crutches. Shortening not known.
R. L Moore.....	46	F.	73	June 5, 1875.	Impacted.	R.	Intra.	Seen soon after accident. Double inclined plane with weight and pulley.	Died on 54th day, from septicæmia. Autopsy verified diagnosis.
M. L. Hall, reported by G. W. Jones.....	47	F.	76	Feb. 28, 1877.	Impacted.	R.	Intra.	No treatment allowed by patient.	Ligamentous union. Some usefulness. 3 Cm. short.
A. C. Rankin.....	48	M.	81	Jan. 1st, 1874.	Simple.	R.	Intra.	Long straight splint was used 8 weeks.	Non-union. Limb useless and painful. Died at end of one year.
Wm. T. Kirk.....	49	F.	63	March 5, 1873.	Simple.	L.	Intra.	Seen early. On 3d day placed limb in fracture box with side splints extending to axilla and perineum, with extension. Kept in bed three months.	Union bony. Walked without crutch or cane after 18 months. 2.4 Cm. short.
J. H. Ledlie.....	50	F.	58	Nov., 1858.	Simple.	L.	Intra.	Seen immediately. Double inclined plane and pillows.	Union ligamentous. Used crutches. 7.6 Cm. short.
R. Boal and J. C. Frye	51	M.	30	Dec. 12, 1868.	Simple.	L.	Intra.	No dressings.	Probably bony. Walks with cane. 3.1 Cm. short.
Wm. M. Chambers...	52	F.	71	1855.	Simple.	L.	Intra.	Sir Astley Cooper's method. No dressings.	Non-union. Walked with cane or crutch. 5 Cm. short.
Wm. M. Chambers...	53	F.	69½	Feb. 23, 1878.	Simple.	L.	Intra.	No dressings.	Non-union. Walking with crutches. Shortening unknown.
No Surgeon.....	54	F.	71	1873.	Simple.	L.	Intra.	No treatment.	Non-union. 5 Cm. short.
H. W. Kendall.....	55	F.	69	Sept., 1866.	Simple.	R.	Intra.	Cause, tripped on carpet. Weight and pulley, 3 months in recumbent position. [See note.]	Limb quite useful. Walks with cane. Union Ligamentous. 6.3 Cm. shortening.
H. W. Kendall.....	56	F.	43	August, 1877.	Simple.	R.	Intra.	Weight, pulley and long splint.	Unable to walk without crutches. Non-union. 2.5 Cm. short.

Name of Surgeon.	No. of Patient.	Sex.	Age when it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-union, Ligamentous or Bony. Amount of Shortening. Degree of Usefulness.
S. L. Cheaney	57	F.	98	Sept. 2, 1870.	Simple.	R.	Intra. (?)	Sand bags and rest.	Was able to get about with a ligamentous union.
Wm. B. Alley	58	M.	78	June, 1861.	Simple.	L.	Intra.	Seen after a few days. No dressings.	Union ligamentous. Walked only on crutches. 5 Cm. short.
Wm. B. Alley	59	F.	82	Sept., 1863.	Simple.	L.	Intra.	Seen at once. Hagedorn's (?) apparatus.	Union ligamentous. Used crutches 7 years before death. 5 Cm. shortening.
Wm. B. Alley.....	60	M.	75	Dec., 1871.	Impacted.	R.	Intra.	Same as above.	Union supposed to be ligamentous. 6.3 Cm. short.
Theodore Meyer	61	F.	45	May 4, 1849.	Simple.	R.	Intra.	Seen early. Spica bandage with starch and glue.	Probably union (ligamentous?). Used crutches last heard from; but doing well.
C. K. Hendee.....	62	F.	59	Sept., 1869.	Simple.	R.	Intra.	Seen 10 days after injury. Splint with extension and counter-extension.	Union ligamentous. Can walk with cane. 3.7 Cm. short.
C. K. Hendee.....	63	F.	68	Feb., 1875.	Simple.	R.	Intra.	Seen 3 months after injury. No dressing.	Union ligamentous. Uses crutch. 7.6 Cm. short.
C. K. Hendee.....	64	M.	62	Jan'y, 1877.	Simple.	R.	Intra.	No dressing except straw bolsters to keep leg from twisting.	Union ligamentous. Walks with cane. 5 Cm. short.
R. Roskoten.....	65	F.	70	1868.	Simple.	R.	Intra.	Seen after 8 weeks. Was first treated for dislocation by attending physician. No dressing when seen by me.	Non-union.
Kingkade, rep'ted by Dr D. O. Morrell..	66	M.	75	Sept. 14, 1877.	Simple.	R.	Intra.	Seen 6 weeks after injury. Hodgen's extension splint and plast. Paris.	Non-union.
A S. Munsell, rep'ted by F. A. Emmons..	67	F.	80	Jan 25th, 1875.	Simple.	R.	Intra.	Seen 2 weeks after injury. Extension.	Non-union. Cannot move limb. 1.8 Cm. short.
Chas. T. Parkes.....	68	F.	76	Sept., 1877.	Simple.	L.	Intra.	Seen within 24 hours. No special dressings. Arranged on pillows.	Non-union probably. Can move limb. No pain. Bed ridden from old age.
R. W. Crothers	69	F.	60	Jan'y, 1859.	Simple.	R.	Intra.	Seen in 3 hours. Bandage, extension and wet paste board from knee to crest of ilium.	Ligamentous union. Walks with cane or crutch. Shortening not perceptible.
R. W. Crothers	70	F.	63	Jan'y, 1866.	Simple.	L.	Intra.	Seen within half an hour. Dressing same as above.	Union ligamentous. Walks with crutch or cane. Shorten'g not obsrvd.

Name of Surgeon.	No. of Patient.	Sex.	Age when it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by surgeon, etc., etc.	RESULT. Union or Non-Union, Ligamentous or Bony. Amount of shortening. Degree of Usefulness.
I. N. Danforth.....	71	M.	70	1865.	Simple.	R.	Intra.	Patient was a physician, and a very impatient patient. Starch dressing only.	Osseous union. Walks with cane. 2.4 Cm. shortening.
I. N. Danforth.....	72	F.	60	1864.	Simple.	R.	Intra.	Elevation foot of bed. Sand-bags, weight and pulley.	Osseous union. Walks with a little limp. 1.8 Cm. shortening.
C. H. Mastin.....	73	F.	8	———	Simple.	R.	Intra. Supposed separation of Epiphysis.	Seen several months after union. Kape's apparatus for fracture of hip.	Walks well with splint. 2.7 Cm. shortening.
C. H. Mastin.....	74	F.	60	Dec., 1877.	Simple.	L.	Intra.	Inclined plane and weight for several weeks. Rest in bed.	Ligamentous union. Walks with crutches.
C. H. Mastin.....	75	F.	58	July, 1876	Simple.	L.	Intra.	15 months after occurrence applied Agnew's splint for coxalgia, with perineal band.	Cannot walk without apparatus. Does very well with it. 2.4 Cm. shortening.
Wm. R. Alley.....	76	F.	76	Sept. 1876	Simple.	L.	Intra.	No dressing.	Died in 10 days of pneumonia.
J. L. Miller, reported by J. S. Whitmire..	77	F.	50	Dec., 1852.	Simple.	———	Intra.	Suppose simplest kind, as the surgeon was too penurious to procure proper apparatus.	No union whatever. Never walked without crutches. 10 Cm. shortening.
E. L. Marshall.....	78	F.	62	October, 1857.	Simple.	R.	Intra.	Seen 4th day. Daniel's fracture-bed.	Union ligamentous (?) Nearly useless. 3.7 Cm. short.
E. L. Marshall.....	79	F.	61	Aug. 30, 1875.	Impacted.	R.	Intra.	Rest, and sand bags.	Ligamentous perhaps. Walks with ease with cane. Slight shortening.
D. S. Booth.....	80	F.	55	1865.	Simple.	L.	Intra.	Foot of bed raised 2½ inches. Extension by weights. Sand bag support.	Union Ligamentous. Amount of shortening undetermined.
D. S. Booth.....	81	F.	60	1872.	Simple.	L.	Intra.	Same as above.	Same as above.
A. J. Mead.....	82	F.	68	1863.	Simple.	R.	Intra.	Seen 3 months after accident. No dressings.	Union Ligamentous. But little use. 3.7 Cm. short.
M. J. Roeschlaub.....	83	M.	42	June 19, 1851.	Simple.	R.	Intra?	Double inclined plane after Dupuytren and Richards. Seen within an hour.	Union bony. Useful. 0.6 Cm. short.
S. L. Cheaney.....	84	F.	56	Aug. 1st, 1867.	Simple.	R.	Intra?	Long splint with heavy weights.	Union bony. Quite useful after six months. Shortening undetermined.

Name of Surgeon.	No. of Patient.	Sex.	Age when it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-Union, Ligamentous or Bony. Amount of Shortening. Degree of Usefulness.
Allin & Sams	85	F.	55	Sept., 1855.	Simple.	L.	Intra.	Extension at first, but discontinued 3d day, too painful.	Union ligamentous probably. Limb useless. 1.8 Cm. short, and 4 years after 3.7 Cm. short.
John Schmidt	86	M.	62	1874.	Simple.	L.	Intra.	No dressing. Recumbent posture.	Limb quite useful with raised heel. 3.7 Cm. short.
W. H. H. King	87	F.	61	July, 1874.	Simple.	L.	Intra.	No dressing. Recumbent position.	Union ligamentous. Walks with crutch and cane.
E. Gaylord	88	F.	67	Jan. 25, 1870.	Impacted.	L.	Intra.	No dressing. Recumbency.	Union bony. Slight eversion. 2.4 Cm. short.
E. Gaylord	89	F.	84	Oct. 31, 1874.	Impacted.	L.	Intra.	No dressing. Recumbency.	Union bony. Some lameness. 3.7 inches short.
Thomas Whitten	90	F.	74	Dec. 20, 1876.	Simple.	L.	Intra.	Seen one week after accident. Extension with long splint.	Union ligamentous. Usefulness much impaired. 3.7 Cm. short.
W. J. Chenoweth	91	M.	70	Nov., 1873.	Simple.	R.	Intra.	Long splint and roller.	Non-union. Patient delirious and would not endure dressings.
H. C. Howard	92	F.	52		Simple.	R.	Intra.	Extension and rest.	No union.
Chas. C. F. Gay	93	F.	60	1871.	Simple.	L.	Intra.	Fracture and shortening, only recognized after some weeks, after tripping on the carpet. No dressings used.	Non-union. Shortening 6.3 Cm.
Chas. C. F. Gay	94	M.	52	1875.	Simple.	L.	Intra.	Extension.	Non-union. Shortening 1.8 Cm. Subsequently died of cancer of stomach.
Chas. C. F. Gay	95	M.	67	March 5, 1870.	Simple.	L.	Intra.	Extension by weight and pulley.	Non-union. 1.8 Cm shortening.
Chas. C. F. Gay	96	M.	32	June 8, 1870.	Simple.	L.	Intra.	Extension by weight and pulley.	Non-union. Shortening 2.5 Cm.
Chas. C. F. Gay	97	M.	61	1875.	Simple.	L.	Intra.	Fell striking on hip. No dressings.	Non-union. 5 Cm. shortening.
Chas. C. F. Gay	98	M.	64	October, 1876.	Simple.	R.	Intra.	Large man, fell striking on left hip. No dressings.	Non-union. 4.7 Cm. short. Died 9 months after injury.
H. T Montgomery	99	F.	70	1871.	Simple.	L.	Intra	Foot of bed 9 inches high. 12 to 16 pounds over pulleys, two parallel.	Union. Walked in 18 months. 1.8 Cm. short. No splint used.

Name of Surgeon.	No. of Patient.	Sex.	Age When it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-union, Ligamentous or Bony. Amount of Shortening. Degree of Usefulness.
Abner Hard.....	100	M.	70	1855.	Simple. Transverse.	R.	Intra.	Seen immediately after injury. First used long splint, but soon changed to pulley and weight and continued to recovery.	Ligamentous union probably. Little shortening. Patient first went on crutches, but finally with cane. Useful leg.
Abner Hard.	101	F.	63	1858.	Simple. Transverse.	R.	Intra.	Seen soon after fracture occurred. Treated by pulley and weight till recovery.	Suppose ligamentous union. Little shortening. After first year was able to go without crutch or cane. Useful limb.
Abner Hard.....	102	F.	64	Dec. 1, 1866.	Simple. Transverse.	R.	Intra.	Seen soon after injury. Treated by pulley and weight.	Suppose ligamentous union. Little shortening. Went first with crutch and then with cane. Useful limb.
Abner Hard.....	103	F.	78	Sept. 14, 1877.	Simple. Transverse.	R.	Intra.	Seen soon after injury. Pulley and weight and subsequently by starch bandage.	Do not know as to union. Patient is using crutches and improving steadily. Little shortening.
H. Wardner.....	104	F.	56	1877.	Simple.	R.	Intra and perhaps partly Extra	Hodgen's splint and plaster Paris.	Union seems to be bony. Walks now with crutch. 0.6 Cm. short. A little eversion.
E. L. Marshall.....	105	F.	65	July 5, 1860.	Simple. Oblique.	L.	Intra and Extra.	Seen seventh day. Daniel's fracture bed.	Probably bony. Walked with cane. 5 Cm. short.
Chas. T. Parkes.....	106	F.	45	Nov., 1876.	Simple. Oblique.	R.	Intra and Extra.	Seen within 24 hours. Extension by weight and pulley and long external splint.	Good bony union. Useful limb. 2.5 Cm. or more short.
Chas. T. Parkes.....	107	M.	42	Febru'ry, 1878.	Impacted.	R.	Intra and Extra.	Weight and pulley and sand bags.	Bony union. Good limb; *some limp.* 1.8 Cm. short.
Chas. T. Parkes, Cook Co. Hospital	108	M.	40	1877.	Simple. Oblique.	L	Intra and Extra.	Weight and pulley.	Bony union. Good limb. 0.6 Cm. short.
Chas. T. Parkes.....	109	M.	65	March, 1875.	Simple. Oblique.	L.	Intra and Extra.	Seen within 24 hours. Weight and pulley and long external splint.	Union bony. Useful but lame. 2.1 Cm. short.
S. C. Plummer and G. G. Craig.....	110	M.	49	March, 1871.	Simple. Oblique.	R.	Extra and Intra.	24 hours after injury. Truesdale's fracture bed.	Bony union. Perfect use. Longer than opposite limb.
I. N. Danforth.....	111	F.	68	1875.	Simple.	L.	Oblique, Extra and Intra.	Weight and pulley extension. Blankets and splints.	Union not certain; believed to be bony. Walks well but complains of weakness. 2.5 Cm. shortening.

Name of Surgeon.	No of Patient.	Sex.	Age When it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-Union, Ligamentous or Bony. Amount of Shortening. Degree of Usefulness.
F. M. Agnew	112	F.	70	May, 1869.	Simple.	R.	Extra and perhaps Intra.	Straight splint, perfect rest.	Union bony. Walks very well with a cane.
C Richards	113	M.	22	1874.	Simple. Oblique.	R.	Extra and Intra.	Sole leather splint and weight for extension.	Bony union. Motion impaired. Fair use. No shortening.
R. P. Lane, reported by G. W. Rohr	114	F.	54	1877.	Simple. Oblique.	R.	Extra and Intra.	Weight and pulley.	Union bony. 3.1 Cm. short.
Various Army Surgeons	115	M.	40	July 19, 1864.	Compound.	R.	Extra and Intra.	Seen at once. Laid on well side. Cooling lotions. No splints. See note.	Bony union. Usefulness impaired. 3.1 Cm. short.
H. C. Howard	116	F.	58	———	Simple.	L.	Extra and Intra.	Extension, immobility, rest.	Good recovery. 1.8 Cm. short.
H. C. Howard	117	F.	45	———	Impacted.	R.	Not certain.	Splints, immobility. No extension.	3.7 short.
Joseph Teft	118	M.	75	1855.	Oblique.	R.	Extra and Intra.	No treatment.	Non-union.
D. Prince	119	M.	35	April 8, 1875.	Simple, Impacted.	R.	Extra and Intra.	Hodgen's splint. Seen 20 days after injury.	Death, 25 weeks after injury, from drinking liniment containing sulphuric acid, while in delirium tremens.
Drs. Howell, reported by Abner Hard	120	M.	68	1876.	Simple. Transverse	R.	Extra.	No dressing. Fracture was not detected for several months; supposed to be a contusion.	Non-union. Shortening 6.3 Cm. No use of limb. Moves by use of crutches.
D. A. K. Steele	121	M.	——	April 25, 1877.	Impacted.	L.	Extra.	Seen 3 days after injury. Hodgen's splint.	Bony union. Very useful limb. No lameness. 0.6 Cm. short.
Saml. H. Birney	122	M.	64	Jan. 12, 1874.	Comminuted.	R.	Extra.	6 hours after fracture. Recumbency, extension by weight and pulley.	Bony union. Eversion. Walks well with cane. 3.7 Cm. short.
Saml. H. Birney	123	M.	3	Jan. 2, 1878.	Comminuted.	R.	Extra.	Seen 5 days after injury. Double, straight thigh splints. Extension by weight and pulley.	Bony union. Began to walk at end of 5 weeks. Not over 1.2 Cm. short.
Z. C. McElroy	124	F.	55	1855.	Simple. Obscure.	L.	Extra.	No apparatus. Placed on pillows.	No union by bone. Walked on crutches 15 years, and died of pneumonia. 5 Cm. short.
J. Stonemetz	125	M.	12	1862.	Simple. Transverse.	L.	Extra.	Liston's splint.	Bony union. Perfect use. No perceptible shortening.

Name of Surgeon.	No. of Patient.	Sex.	Age When it Occurred.	Date of Occurrence	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-Union, Ligamentous or Bony. Amount of Shortening. Degree of Usefulness.
Chas. Reber	126	F.	65	1872.	Simple.	L.	Extra.	Seen 24 hours after accident. Extension by weight and pulley.	Union ligamentous. Can walk with cane or crutch. 2.5 Cm. shortening.
W. Meacher	127	M.	60	1873.	Simple.	L.	Extra.	Sand bags. Extension by weight and pulley.	Good recovery. Walks well. 0.6 Cm. short.
J. R. Wells	128	F.	60	Dec. 19, 1874.	Simple.	L.	Extra.	Truesdale's fracture bed.	Union bony. Perfect use. No perceptible shortening.
H. Culbertson	129	M.	27	July 10, 1854.	Simple, with dislocation of ankle same side, and simple fracture of both bones of left leg.	R.	Extra. Note.	Double inclined plane. Extension could not be borne. Supported by pillows.	Union bony. Limb useful. 6.3 Cm. short.
R. Roskoten	130	M.	51	Jan. 14, 1858.	Simple, with contusions.	L.	Extra.	Dzondis' apparatus, improved by Hagedorn, for extension, and the splint of Burminghasen to support fracture in the proper position.	Bony union. Good use of limb. 1.8 Cm. short.
Fred. Brendel	131	M.	44	Nov. 22, 1869.	Simple.	R.	Extra.	Straight splint and extension.	Union bony. Tolerably good use of leg, which was shortened by a previous fracture. Total shortening 3.7 Cm.
A. J. Mead	132	F.	70	1856.	Simple.	L.	Extra.	Seen at end of 4 months. No dressings.	Union ligamentous. Never walked without crutch. 5 Cm. shortening.
J. Stout	133	F.	70	March 19, 1869.	Simple.	R.	Extra.	Extension by weight.	Union bony. Limb useful. 1.8 Cm. shortening.
C. B. Reed	134	M.	70	Sept. 28, 1866.	Simple.	R.	Extra.	Seen 3 hours after injury. Limb supported by cushions.	Ligamentous union. Usefulness much impaired. 5 Cm. shortening.
Chas. Reber	135	F.	63	1869.	Simple.	R.	Extra.	Seen in 6 hours. Extension by weight and pulley.	Ligamentous union. Walks with cane or crutch. 2.5 Cm. shortening.
W. J. Chenoweth	136	F.	19	Aug. 28, 1877.	Impacted.	R.	Extra.	Long splint and roller.	Good union. No appreciable shortening.
W. J. Chochran	137	M.	52	January, 1876.	Impacted.	L.	Extra.	No displacement. Long splint and rest.	Bony union. Slight eversion of foot. 1.2 Cm. short. Walks with cane.
J. H. Ledlie	138	M.	20	April 10, 1862.	Compound, G. S. W.	L.	Extra.	Seen one month after accident. Extension with weight and pulley.	Union bony; joint anchylosed. Good use. 3.7 Cm. short.

Name of Surgeon.	No. of Patient.	Sex.	Age When it Occurred.	Date of Occurrence.	Character of Fracture.	Right or Left Side.	Extra or Intra-Capsular.	TREATMENT. What application or dressing was used? When first seen by Surgeon, etc., etc.	RESULT. Union or Non-Union, Ligamentous or Bony. Amount of Shortening. Degree of Usefulness.
T. M. Sams	139	F.	36	Dec., 1849.	Impacted.	R.	Extra.	Long splint and extension.	Good union; bony. Useful but imperfect. 1.2 Cm. short.
F. B. Haller	140	M.	70	1852.	Simple.	R.	Extra. Anatomical neck. (?)	Seen 4 hours after injury. Straight splint.	*Died* 3rd day from internal injuries.
C. H. Richings, reported by G. W. Rhor.	141	F.	55	1872.	Simple. Transverse.	L.	Extra.	Long straight splint.	Union bony. No perceptible shortening.
B. K. Lucas	142	M.	71	Jan. 9, 1877.	Simple.	R.	Extra.	Extension by weight and pulley at once.	Bony union. Can walk long distance. 1.2 Cm. short.
Josiah Whitnel	143	M.	43	1858.	Simple.	L.	Extra.	Seen first day. Used Day's splint	Bony union. 1.2 Cm. short.
Josiah Whitnel	144	M.	70	1866.	Simple.	R.	Extra.	Seen 2 months after injury. No dressings used.	Union ligamentous. 7.5 Cm. short.
Josiah Whitnel	145	M.	69	1866.	Simple.	R.	Extra.	Seen first day. Used Day's splint.	Non-union.
Wm. M. Chambers and A. Evans	146	M.	40	1850.	Simple.	L.	Extra.	Liston's splint.	Non-union (ligamentous?). Walked with cane. 3.7 Cm. short.
Wm. H. H. King	147	F.	58	August 2, 1870.	Simple.	R.	Extra.	Seen in a few hours. Dressed with weight and pulley.	Union bony. 1.8 Cm. short.
Drs. Monroe and Speed	148	M.	35	May 29, 1872.	Simple. Transverse.	R.	Extra.	Seen at once. Dressed in Day's splint (?) with extension and counter-extension.	Union supposed to be bony. Patient *died* in six months of phthisis. Shortening 1.2 Cm.
Chas. C. F. Gay	149	M.	27	May, 1874.	Simple and comp'nd fracture of tibia	L.	Extra.	Fell from a boat. Extension simply.	Non-union. 1.8 Cm. short.
Chas. C. F. Gay	150	M.	55	October, 1874.	Simple.	L.	Extra.	Extension.	Bony union. 5 Cm. short. Walks with cane and high heel.
H. F. Montgomery	151	F.	25		Simple.	L.	Extra.	Long splint with screw extension.	United. 2.2 Cm. short.
Chas. C. F. Gay	152	F.	24	1877.	Simple.	R.	Cervix, part not stated.	No statement.	Non-union. Shortening 5 Cm. Toes everted. Limb much atrophied.
J. F. Stewart	153	F.	3	April 22, 1871.	Simple.	R.	Extra.	Seen at once. Applied simple straight splint.	Bony union. No perceptible shortening. Perfect use.
J. F. Stewart	154	M.	56	Feb. 17, 1873.	Simple.	R.	Extra.	Seen at once. Extension by weight and pulley.	Bony union. Almost perfect use. 1.2 Cm. short.
J. F. Stewart and J. Murphy	155	M.	64	July 12, 1875.	Simple.	R.	Extra.	Seen at once. Straight splint and extension.	Bony union. Usefulness much impaired, but improving. 3.1 Cm. short.

first symptoms, in intensity it varies greatly in different cases. I have treated cases in which, from first to last, there was comparatively little cough. Hoarseness and huskiness of the voice, like the cough, is generally one of the first observable symptoms; it persists throughout the disease, and in fatal cases, towards the close of life, the voice is entirely lost. There is usually more or less expectoration. In some cases it is abundant, in others scanty, depending upon the extent of surface involved in the inflammation. A characteristic feature of the sputum is its extreme toughness and tenacity, so much so, that it is often expelled with the greatest difficulty.

In the advanced stage of the disease, in favorable cases, the expectoration not unfrequently mixed with strips and patches of pseudo-membrane, becomes quite profuse and loses in a measure its former tough, tenacious element. The respiration is always accelerated, not to the extent however that we would expect; certainly not so much so as in other affections of the respiratory apparatus far less serious.

The pulse in the beginning varies in frequency from 120 to 130 beats per minute; in many cases is full and strong, while in others it is rapid and feeble.

As the disease progresses the gravity of the symptoms becomes marked and unmistakable. In consequence of the increasing laryngeal, and, it may be, tracheal obstruction, the breathing is labored and difficult. Along with the mechanical impediment to respiration there seems to be a neuropathic or nervous factor, which affecting the larnyx, produces spasmodic contraction of its muscles, and adds no little to the distressing paroxysms of dyspnœa so common in the latter stage of this disease.

In fatal cases death usually occurs in five or six days; in those of unusual severity, however, life may terminate as early as the second or third day.

The mode of death is of course, at least in the majority of instances, by asphyxia; a few die seemingly from pure exhaustion. In some, death is peaceful and quiet; in others life goes out during the throes of a violent convulsion. Unless a comatose condition should supervene, which rarely occurs, the intellect generally is clear to the last.

As this is a disease of almost unparalled fatality it is of the utmost importance that a correct diagnosis be made in the very beginning, as everything, so far as a successful result is concerned, depends upon *early* treatment. The affection for which, perhaps, more than any other it is most frequently mistaken is spasmodic laryngitis, sometimes called catarrhal or false croup. While in some particulars the two diseases simulate each other very much, it will be found that there are diagnostic symptoms in one which are not present in the other, and, which carefully observed, will almost invariably lead to a correct differential diagnosis.

The one is rather gradual in its inception, with symptoms not unlike those in a common cold, but steadily increasing in severity; the other commences, as a rule, in the night, abruptly, generally without any premonitory symptoms, followed very soon by a rapid improvement. In the one the cough, generally very troublesome, is eminently *croupal*, that is, *dry and hoarse;* a cough which it is difficult to describe in words, but which once heard is not likely to be forgotten. In the other the cough is not nearly so frequent and is wanting in that singularly dry, harsh, ringing sound so characteristic of the former. In the one, on inspection of the throat, in almost every case you will discover low down in the fauces the pseudo-membrane, also fragments of this, sooner or later, may be seen in the sputum.

Croup is sometimes confounded with internal convulsions or laryngismus stridulus. This mistake ought not to be made, for it seems to me there is scarcely any symptom in common in the two diseases. This latter is a wholly nervous affection, and while there may be and is at times, great difficulty in breathing, it is attended with no fever; there is no hoarseness of the voice and no croupal cough. In what I have had to say thus far, particularly in that part of this paper which relates to the clinical history and diagnostic features of croup, I have relied mainly on facts obtained by actual observation and personal experience. For in the past few years I have had under medical management at least my share of cases belonging to this disease, and the great fatality attending their treatment has caused me no little mortification and brought up reflections that were painfully unpleasant.

In this connection I would refer briefly to the theory advocated

by some, of the *identity* of true croup and diphtheria. This to me seems to be strange conclusion, totally unsupported by clinical facts, and I believe by pathological also. Several years since, while practising medicine in the eastern part of the county, diphtheria prevailed as an epidemic in the neighborhood in which I lived. The affected district embraced an area about two miles wide and three miles long, was elevated and rolling, lying in close proximity to a small running stream, and for years had been comparatively free from sickness of all kinds. The disease broke out about the first of October and continued to prevail until the following February. During its prevalence I treated, alone and jointly, quite a large number of cases. I saw cases representing every phase and character of the disease, from the most malignant down to the mildest grade possible. Except in the very old, no age, sex or condition seemed to be wholly exempt from it. All ages, from the infant of two months to the strong man of fifty years, were numbered among its victims. The vast majority of those attacked however were children probably between two and ten years of age.

Different cases presented different and varied symptoms. In some the first evidence of illness was manifested in a severe and violent chill; this, during the exacerbation of fever, was not unfrequently followed, in children, by convulsions. In others the first symptoms were apparently insignificant and trifling, the patient complaining for two, three or four days of chilliness, headache, slight fever with impaired appetite, but was still able to be up and walk about. But in all cases, however severe or mild, an examination of the throat would reveal more or less redness, swelling and inflammation of the fauces; and if the case had been ailing a day or two there would be found usually on the tonsils, first the characteristic diphtheritic exudation, and if the attack was a mild one the pseudo-membrane would frequently confine itself to these glands. In those of a severe type the entire pharynx up to the velum palati and down as far as the eye could view, would be lined with it; while in cases representing the severest grade of the disease, it invaded the posterior and anterior nares, covered the uvula, soft palate, inside of the cheeks, lips and gums. Exceptionally the larynx and trachea were involved in

the exudative process, and of course we then had superadded the usual croupal phenomena. There was in every case swelling of the lymphatic glands of the neck, nearly always, it appeared, proportionate to the intensity of the attack.

In some instances the glandular enlargement was enormous, involving the chain of glands anteriorly, from the base of one ear to the other. The swelling from first to last was characterized by a stony hardness, was generally sensitive to the touch, and in no case was it followed by suppuration. In severe cases there were symptoms not unlike those in mercurial ptyalism; the saliva, fœtid and acrid, pouring from the mouth in almost a continual stream. From the anterior nares, also, there issued a foul burning discharge, which, in its passage over the lips, would inflame and blister as if by fire. Quickly upon the swollen lips there appear, in many instances, the characteristic exudation. Frequently there was hæmorrhage, not always slight, but sometimes profuse and alarming. The seat of the hæmorrhage was sometimes as extensive as the diphtheritic inflammation, however wide spread that might be. In some of the most malignant cases, there was a peculiar, sickening, nauseous odor of the breath which was almost intolerable. In one or two belonging to this latter class, there was gangrene of the fauces. At one time I picked from the throat of an interesting and intelligent young lady, one among the first cases, both tonsils entire, the whole of the soft palate, with its anterior and posterior arches, and a considerable portion of the contiguous muscular tissue.

Deglutition was always difficult and painful, and sometimes absolutely impossible. It was not uncommon for cases to pass two or three days in succession, totally unable to swallow a teaspoonful of the blandest fluid. A not uncommon symptom was an excruciating pain in one or both ears. Cough was not a prominent symptom, neither in severe or mild cases, excepting in those where there was an involvement of the larynx or trachea, which, as already observed, did not often occur.

The duration of the disease, in fatal cases, varied widely. One bright little girl of four years died in thirty-six hours from the time she first began to complain. In this case the local lesions were comparatively insignificant, death resulting, apparently,

from the action of some powerful, general depressant or poison. Some lingered for two or three weeks, and died from asthenia, while there were others still who, after struggling through all the different stages of the disease, with every prospect of an early restoration to health, paralysis of the pharyngeal and palatine muscles supervening, died at last of starvation. Some, after having been convalescing for weeks, were still pale, cachectic and feeble, looking as if they had just passed from the hands of some blighting pestilence—and they had. I just referred to paralysis in connection with the disease. This occurred as a sequel, and, I think, only in the severe cases, and in no instance until after the establishment of convalescence. As to the time of its appearance, and the different parts of the body affected, there was no uniformity or regularity, and in regard to its duration and results, every principle of nervous pathology seemed to be violated.

In some the paralysis was limited to the pharyngeal muscles; in others the palate alone was affected. Some were paralyzed in one arm; another in the leg. One had paraplegia, two hemiplegia. Several had facial paralysis, affecting one side only. Strabismus was not uncommon. One patient had converging strabismus in one eye, and diverging in the other. I think, as a rule, the paralysis was confined to the motor system of nerves, special and general sensibility, apparently, being but little impaired, though this was a point it was difficult, in some cases, to decide. Excepting in one or two quite young children, in whom the pharynx and palate were paralyzed, rendering deglutition impossible, death resulting from inanition, every case of which I had any knowledge recovered perfectly from the paralysis in periods ranging from three to eight weeks. I did not examine the urine for albumen, but have quite recently had under treatment several severe cases of the disease, where I examined urine and found it present in considerable quantity.

I trust I will be pardoned for this seeming digression, and for the time consumed in enumerating some facts I have learned while at the bedside of those suffering with this frightful malady. I have tried to give some of the clinical and diagnostic facts relating to diphtheria, as they actually occurred, in contra-dis-

tinction to those of true croup, which some eminent pathologists claim is identical with diphtheria. While I am not prepared to prove the non-identity or duality of the two diseases, I am no less prepared to accept the theory of their oneness or unity.

All who have had any considerable experience in the treatment of true croup, and have watched its progress and its results, will, I think, concur in the conclusion that it is one of the most dangerous diseases of childhood; indeed, called upon to give a prognosis in any given case, if I should be governed by my own past unhappy experience, it would almost necessarily be unfavorable.

Dr. Ware, of Boston, high authority in this disease, says ninety-five per cent. of the cases of true croup prove fatal. Out of every one hundred attacked, only five recover! This is, indeed, a fearful mortality, but, notwithstanding this unfavorable showing, I incline to the belief that many cases that die would get well, could judicious treatment be instituted at the *proper time*. The disease is a deceptive one. In the midst of violent and threatening symptoms there is often a rapid change, apparently, for the better. The child becomes quiet, the distressing dyspnœa in a measure subsides, and the little patient, if old enough, may insist on getting on its feet and running about the room. This amelioration in the symptoms is supposed to be due to the detachment of the exudation. Unfortunately, in the vast majority of cases, the improvement is of short duration. After the lapse of a few hours the membrane is reformed, the child grows rapidly worse, and is very soon relieved by death.

We should, therefore, be careful and not deceive ourselves; nor should we encourage the hopes of friends, when we have reason to know that these hopes are delusive, and are soon doomed to disappointment. To do so is always a cruel wrong, and not unfrequently results in the forfeiture of that confidence and respect which we might otherwise command. A favorable result may be looked for, if, along with an amelioration of the threatening symptoms, the cough should become loose and the expectoration free. In those that recover, convalescence is usually slow and protracted.

In the treatment of this disease, the profession is forced to

acknowledge the humiliating truth that they are comparatively powerless. As the presence of the false membrane is the chief source of danger, an important point to decide is, can its formation be prevented? Is there any method of treatment, however early commenced and faithfully carried out, that will prevent the fibrous exudation? Does the exudation depend upon the active character and violence of the inflammation? The history of the disease, together with the results of treatment, as given by competent observers, would certainly give a negative answer to these interrogatories. I think it may be possible, if the case can be seen in the very beginning, by judicious management, to limit the *quantity* of the deposit on any given surface, and, it may be, also the *extent* of the inflamed mucous membrane; but we are confronted with the fact that, in the majority of cases, the physician is not called soon enough to accomplish ends so important and desirable. As a rule, long before medical aid is solicited the pseudo-membrane is fully formed, and is gradually and certainly moving forward in its work of death. Is there any remedy which, applied topically, will dissolve or remove the exudation? Not as yet known.

Bearing in mind then, that the false membrane is already present, on which depends the principal danger; that if life is prolonged a few days it will be loosened and thrown off by the suppurative process which is sure to take place, the indications are plain.

Heroic measures, such as blood letting and the administration of powerful sedatives, should not, in my opinion, be resorted to. The patient's strength ought rather be husbanded for the approaching conflict, by appropriate nourishment, and, it may be, the use of alcoholic stimulants, and such therapeutic means adopted and persisted in as may relieve the engorged condition of the inflamed mucous membrane, remove the submucous œdema, promote expectoration and assist in the detachment of the false membrane. In the effort to accomplish at least some of these results, emetics are, perhaps, more largely employed than any other class of remedies.

There is no question, I think, but what, in many cases, they are productive of good, but their use may be most frightfully

abused. They undoubtedly play a very important part in controling the nervous element of the disease; they promote expectoration, and they have something to do, in the later stage of the affection, in the separation and expulsion of the exudation.

This latter happy effect of an emetic was strikingly manifested in a case of mine a few years ago. The patient was a boy about five years of age, of a delicate and feeble constitution, and had been an invalid all his life.

He had been sick with croup four or five days, and the case was as unpromising as it could well be. Calling during one of his severe paroxysms of dyspnœa, I was urged by the friends, if possible, to do something more for the little sufferer. As soon as it was practicable, I poured down the throat of my patient a solution of sulphate of zinc. In a very brief period this was followed by free emesis, during which it appeared as if he must die from suffocation; but in the midst of his struggles for life, there was ejected from the mouth, with considerable force, quite a large piece of pseudo-membrane. It was very nearly a complete and perfect tube, was about two inches in length, of a dark or leaden color, soft and friable, and its mucous surface was smeared with pus and mucous. The relief to the patient was instantaneous and well-nigh complete. Convalescence commenced at once and the case recovered. From the long list of emetics some choose one drug and some another. The sulphate of alum is a favorite emetic with many. I have used it often, and can testify to its efficiency. Combined with an equal quantity of ipecac (from one to two grams of each), it rarely fails to provoke vomiting. The sulphate of zinc is frequently used; compound syrup of squill, and even the tartarized antimony, has its advocates. The one, which for several years I have relied on more than any other, is the sulphate of copper. Its chief recommendations are the smallness of the dose, the prompt manner in which it acts, and the almost complete absence of any depressing effect. To a child from three to five years old, may be given 0.07 or 0.15 grams dissolved in water, and repeated, if necessary, in fifteen minutes. Turpeth mineral is also highly extolled by some. I have never used it, and have therefore no experience to give.

Calomel, with many eminent physicians, is a remedy of high

repute in this disease. I have but little faith in the correctness of the theory entertained by some, viz: that its employment in croup, by some peculiar effect upon the blood, prevents the formation of the exudations. It is more reasonable to conclude that the good results which some claim for it, are due to the *thinning* effect it may have on the thickened mucous membrane and the removal of the sub-mucous infiltration. I have used it in many cases, in small doses frequently repeated, and in large ones at longer intervals and have tried to watch and study its effects, but cannot say that I am prepared to speak absolutely in its favor. Inasmuch, however, as it has many strong friends and able advocates, it would be well to give it a trial. To a child four or five years of age, I would give as much as 0.15 grams, combined or not, with Dover powder, every two or three hours, continued for two or three days.

Chloride potash is largely used by many, combined with muriate of ammonia, it is a favorite remedy of Dr. J. Lewis Smith. In the treatment of this affection, I consider it an agent of great value, and inasmuch as it is a solvent of fibrin, it meets indications perhaps met by no other drug. While we may not be able to make a topical application of the remedy to the affected surface, it should be remembered that, taken internally, it is eliminated in the secretions and excretions, hence, in this way, it may come in direct contact with every part of the false membrane. I usually make a saturated solution and give it, combined with simple syrup, in teaspoonful doses, for several days in succession if all goes well.

Local treatment is, in many cases, attended with flattering results; indeed, in the management of croup, many rely mainly on this method of treatment. Of the remedies used topically, nitrate of silver has many champions; a solution varying in strength from four to six per cent. may be applied to the pharynx several times in the twenty-four hours, if thought necessary.

Some advise the introduction of the probang into the larynx, a feat which I would not recommend, and one which, I think, is rarely successfully performed. Among other local substances, now largely used by many, may be mentioned the liquor of the subsulphate of iron, bromine, and carbolic acid. With these I

have had no experience. In this connection I would refer specially to the inhalation of steam as a measure of great value. I have employed it in a number of cases, in some of which, at least, I can speak with confidence of its happy effects. A few years since a member of my own family, a boy six years of age, was attacked with croup in its secondary form, The disease occurred in the declining stage of measles. The child had naturally a fair constitution, but his system had been considerably weakened and reduced by the primary disease.

The croupal symptoms soon became marked and threatening, great dyspnœa and a total extinction of the voice rapidly following on the first appearance of the disease. Every feature in the case seemed dark and gloomy, and death appeared imminent and near at hand. Deciding to try the effect of steam, he was taken into a rather small room, and the necessary preparations made as rapidly as possible. These consisted in simply heating several flat rocks and bricks, and placing them in large shallow pans containing a little water. In this way steam was rapidly generated, and very soon I was overjoyed to notice a change for the better. The steaming process was kept up without intermission for at least twenty-four hours, when—the child all this time comparatively comfortable—it was intermitted. In a very brief period the cough became dry and the breathing labored, and the case was evidently again losing ground. The steaming was resumed and continued incessantly for seventy-two hours, when it was gradually withdrawn. From this time there was a slow and steady improvement, which continued until his health was fully restored. It might be proper to add that the aphonia continued for five weeks.

Throughout the treatment the temperature of the room was maintained at 27° to 32° C., and the atmosphere within literally steeped in moisture. As to the external treatment of the neck but little need be said. Some prefer poultices; some recommend the use of iced water; while there are others who blister. Poultices and warm water dressings are, in some respects, superior to all other applications, and I generally give them the preference.

One word more and I will close the already too long and

imperfect paper. Failing to relieve one patient by therapeutic measures, the question of the propriety of tracheotomy may come up for our decision. As to whether the operation does or does not save life in this disease, the opinions of the medical world are divided. Some eminent practitioners advise and practice it; others condemn it in the strongest terms. If the published statistics in regard to tracheotomy in croup are reliable, certainly many cases operated upon get well, whether *because* of the operation or in *spite* of it may be a question difficult to settle. My own humble opinion is, that the operation, *timely* resorted to, *may*, in rare cases, save life.

Since the days of Bretonneau and Trousseau, it has been practiced quite largely in Great Britain and France, rather sparingly in the United States, though at present the propriety of the operation seems to be growing in favor with the profession of our own country.

ARTICLE IV.

ON SOME OF THE UNUSUAL EFFECTS OF ATROPINE, AND THE MEANS TO COUNTERACT THEM. By F. C. HOTZ, M.D. (Read before the Chicago Medical Society, Dec. 2, 1878.)

The form in which atropine is generally used in ophthalmic practice, is a watery solution of sulphate of atropia (0.1 in 25.0 grams). A drop of this solution put upon the conjunctival surface of the lower lid causes no pain, and no more irritation than a drop of pure water. As a rule, it has this pleasant effect upon healthy eyes as well as upon those affected with the inflammations for which the use of atropine is indicated.

This rule, however, applies only to the use of pure sulphate of atropia, which makes a clear, colorless, neutral solution, without any sediment. The presence of free acid, sediments, or any other impurity, manifests itself quickly by an unpleasant effect upon the eye. And as it occasionally happens that an inferior article is dispensed by druggists, it may be well to know that the eye is an exceedingly sensitive test-object for the chemical purity

of atropine, and that by its reaction we may sometimes prove a solution to be adulterated which in appearance seems to be quite the reverse.

In August I prescribed atropine to a young lady for acute ulcerative keratitis. Two days afterward, when she called again, I was surprised to find the pupil undilated, although the iris was not implicated in the morbid process, and the corneal inflammation of such a degree that I expected a quick and complete mydriasis. As patients and their attendants are often exceedingly awkward in the manipulation of eye-drops, I attributed the absence of mydriasis to a failure on the part of the patient in applying the medicine. I instilled a drop of a one per cent. solution I kept at my office, in order to show her how it should be applied. The pupil readily responded to my atropine, and was completely dilated when the patient left the office. Still again, after two days, she came with her eye unimproved and the pupil undilated; but she assured me that the drops had been used regularly, and that she was sure they had reached her eye; she said she could feel them, for every time the drop was put in her eye, it smarted for about fifteen minutes. This statement was sufficient evidence that the medicine had been applied properly, and if it had not the desired effect, the failure could not have resulted from insufficient use, but was from an abnormal action of the medicine itself. And it remained to be determined whether this anomalous effect was produced by an impure solution or by a peculiar intolerance of atropine on the part of the eye. The solution the lady showed me was clear, colorless, free of acid and sediment, had the characteristic taste of atropine; in short, it seemed to differ in no way from my solution, which I knew to be perfectly pure and trustworthy. But when I put a drop of my solution in the lady's eye, it did not cause any smarting, the pupil soon began to dilate, and under the continued use of my solution the pupil remained dilated, and the eye quickly recovered. This experiment showed that there was something wrong with the other solution. For if the smarting it produced had been due to an intolerance of atropine on the part of the eye, the same unpleasant effect would have succeeded the instillation of my solution; but if the solution of known

purity acted normally in every respect, while the other produced abnormal symptoms, we must logically infer that these symptoms were due to an adulteration of the atropine in the second solution.

I relate this instance because it may show that in cases in which we believe we have had an anomalous local effect of atropine, we must always ascertain whether the atropine employed was pure. An impure alkaloid will always act as an irritant upon the eye, while the pure atropine sulphate does so in very exceptional cases.

But occasionally we meet with patients upon whom the use of the purest alkaloid has a peculiar effect, altogether different from that which we are accustomed to observe. In all these cases, I believe, there exists a peculiar susceptibility of the patients, which manifests itself by an unusual, local or constitutional effect, of the drug.

The local idiosyncrasy—if I may use this phrase—is characterized by a sense of smarting and heat in the eye, accompanied by redness of the conjunctiva and an increased secretion of tears the first and every subsequent time atropine is dropped in the eye. These symptoms may pass off in a few minutes, or they may last a few hours.

As an illustration of this kind of unusual effect of atropine, I will cite the following observation.

In May, 1877, a gentleman consulted me in regard to an increasing dimness of his left eye. The pupil was very small, and to dilate it for the purpose of an ophthalmoscopic examination, I instilled a drop of my atropine solution. As it had acted very pleasantly on all previous occasions, I was surprised to hear this patient complain of considerable smarting after the atropine was dropped in the eye. The pain was so great that the patient had to keep his eye shut for a few minutes, and when he was able to open it again, the conjunctiva was very red, and the tears ran over the lower lid freely. But the pupil became fully dilated in due time, and I could ascertain that the fundus of the eye was normal, and the impairment of vision was caused by a slight central cloudiness of the crystalline lens. At that time it did not occur to me that there was any relation between the peculiar

symptoms which followed the use of atropine, and the drug itself, but I regarded their occurrence as merely incidental. But in August the patient came back for a second examination, and the use of atropine produced the same smarting and redness in the eye as I observed on the first occasion. And then it struck me that between the atropine and these symptoms there was a relation of cause and effect, and that this eye was unusually intolerant of the solution.

But the most remarkable instances of atropine idiosyncrasy are those cases in which a single drop of atropine put in the eye produces characteristic symptoms of constitutional disturbance. A short time after the application of atropine (which may or may not cause a slight smarting in the eye), the patient is taken with palpitation of the heart, precordial anxiety, headache, dryness of the throat, and restlessness which is considerably aggravated by a burning and intolerable itching all over his body. The face then becomes flushed, as if the patient had been standing over a hot stove, or was in the fever heat of intense excitement. This redness swiftly extends from the face to the neck, arms and over the other parts of the body, so that in half an hour the patient looks as if he had scarlet fever. These symptoms subside in the course of a few hours; sometimes desquamation of the epidermis succeeds this scarlatinous eruption.

Cases of this unusual susceptibility for atropine have been frequently observed in ophthalmic and other practice. So we find in Ziemssen's Cyclopædia, vol. xvii, p. 667, the following instances: "J. G. Wilson (*Glasgow Med. Journal*, Feb., 1872) saw two cases in lying-in women who had belladonna ointment rubbed on their breasts to produce galactostasia, and upon whom a scarlet eruption came out, which lasted three or four days. Stadler (*Med. Times and Gaz.*, April, 1868) saw a similar eruption appear upon a child three months old, within a few minutes after the administration of $\frac{1}{20}$ grain (0,0003) of atropine sulphate for whooping cough. It lasted five hours."

If similar cases are oftener observed by ophthalmic surgeons than by practitioners, it is because they use atropine so much more frequently. The symptoms of intoxication are the same

whether the alkaloid is given internally or applied externally; but it is interesting to consider the infinite smallness of the dose which is sufficient for the production of a toxic effect in those cases. One drop of a half per cent. solution contains about 0.0003 ($\frac{1}{240}$ grain) of atropine; but it is safe to assume that at least one half of this drop is washed out by the tears and runs over the lower lid; and only 0.00015 ($\frac{1}{480}$ grain) remains to be absorbed by the cornea and conjunctiva, and taken up into the blood causes the constitutional disturbance.

It is the unanimous opinion of all writers that when a patient exhibits symptoms of idiosyncrasy, the further use of atropine should be dispensed with. Under circumstances, however, this advice may place the attending physician in a very embarrassing position; for instance, if he has to treat a case of acute iritis. If he does not use atropine (and he cannot obtain any other reliable mydriatic) the pupil remains contracted, and probably will be occluded by circular synechiæ; if he does use it, his patient will be in a state of continuous intoxication. Should he suffer the eye to be permanently damaged, or subject the patient to the annoyance and danger of atropine poisoning? This is a serious dilemma; and the only satisfactory solution seems to me is to find some remedy which possesses the property of counteracting the unpleasant effects attending the use of atropine, without interfering with its valuable local influence upon the eye.

The antagonism of action of atropine and morphine is a well established fact and has been utilized by many in counteracting the nauseating effect hypodermic injections of morphine produce in many patients, by adding to the morphine solution a small amount of atropine. It has also been proven, in a number of instances, by the antidotal effect hypodermic injections of morphine had in poisoning by atropine and vice versa. And the hypodermic use of morphine was also recommended by Graefe and others to counteract the constitutional effect sometimes produced by the local use of atropine. These considerations led me to try whether the unpleasant constitutional effect of atropine could not be neutralized or altogether obviated by adding a little morphine to the atropine solution intended for local use. During last summer I tried this

experiment in the following case, which exhibited the typical signs of idiosyncrasy after each instillation of atropine.

ACUTE ULCERATIVE KERATITIS; ATROPINE IDIOSYNCRACY RELIEVED BY MORPHINE.

Mrs. C. S., aged 39 years, of a very nervous temperament, has repeatedly suffered from inflammations of her eyes. Thirteen years ago the right eye was the seat of a protracted and painful inflammation, which permanently impaired its sight. In March, 1873, I treated her left eye for marginal keratitis. She had several slight attacks since, but the eye always recovered in a few days. In June last, both eyes became very red and extremely painful. The patient, encouraged by previous experience, expected to get over this attack just as quickly; but after patiently waiting in vain three weeks for the change, she at last concluded to seek medical advice. I saw the lady on June 26, and found her very nervous and worried, particularly about her left eye which, she feared, would become as blind as her right one. There was a copious secretion of tears, marked intolerance of light, and great supra-orbital neuralgia. The eye-balls were tender to pressure, and showed a broad zone of pericorneal injection; in the left cornea, near the upper margin, a small, longitudinal, superficial ulcer; in the right cornea an old central cloudiness of the epithelium, but no new infiltration. The pupils were contracted, but dilated readily and regularly in the dark. I prescribed a half per cent. solution of sulphate of atropia, to be instilled into each eye three times daily; and a saline cathartic.

At my visit on the next day I found the eyes better and the pupils fully and regularly dilated; the patient had no pain, but she said that fifteen minutes after each application of the drops she had felt a great uneasiness, with palpitation of the heart, dryness of throat, a burning and itching sensation all over her body, and, soon after, her face and whole body were as red as if she had the scarlet fever. This lasted about one hour; then the integument recovered its natural color and the patient felt quite well.

The next day the patient gave the same report, and I could convince myself of the correctness of her observation. I instilled

with the dropping tube one small drop of the atropine solution into the left eye, and had her keep the eye closed for a few minutes, while I was pressing upon the lachrymal sac. In fifteen minutes by the watch the acceleration of the heart's action manifested itself in the quickened pulse; the patient felt oppressed, as though she would suffocate; had that burning and intolerable prickling of the skin; her face became scarlet, and this redness swiftly extended over neck, hands and arms.

This observation left no doubt that these symptoms were the constitutional effect of the minute dose of atropine administered, and that the medicine had to be discontinued unless its constitutional effect could be prevented. I disliked the idea of abandoning the use of atropine, and it occurred to me to try whether the antagonism of morphine and atropine could not be utilized in this case. And in order to make the experiment conclusive, I had the same solution of atropia continued, but added to it 5 centigrams of morphiæ sulphas. The patient used this combination without any discomfort; those annoying constitutional disturbances did not once re-appear, and the eyes got well.

But in September the patient had a relapse of keratitis in the left eye. For the sake of testing her idiosyncracy again, I put one drop of a pure one-half per cent. solution of atropine into the eye. It had precisely the same effect as in June; and again, the addition of morphine arrested the constitutional effect, without interfering in the least with the local action of the atropine upon the iris.

It will be noticed that in the above described case the constitutional symptoms occurred even when I employed these precautionary measures which prevent the entrance of atropine into the tear passages and the pharynx, whence it is more rapidly absorbed than in the eye. Sometimes the constitutional effect can be obviated by pressing upon the lachrymal sac with the finger during and a little while after the instillation of atropine.

This measure is especially successful in those cases in which the absorption of such minute doses of atropine produces no other sign of poisoning than dryness in the throat. One of my patients, who was greatly annoyed by this dry feeling in the pharynx, operated in the following manner: When he put

atropine in his right eye, he laid down and turned his head to the right, so that the tears would flow toward the external canthus, as the lowest part of the conjunctival sac. By thus reversing the tear current for a minute, the atropine which was not absorbed by the eye was washed out by the tears, and none got into the throat.

Under circumstances, the entrance of atropine into the pharynx produces more distressing symptoms than dryness of the throat. All along its passage over mucous membranes the atropine is eagerly absorbed, and although each drop contains but a very minute dose, a sufficient amount may gradually accumulate in the blood to produce marked toxic symptoms. Children have shown signs of poisoning after a few instillations of the half per cent. solutions; and in adults similar accidents have occurred if stronger solutions were used, and especially if the applications were made in short intervals. I remember very well a case which occurred in my practice some four years ago, and I will give a brief report of it from notes kindly furnished by Dr. W. T. Montgomery.

CASE OF POISONING FROM LOCAL USE OF SOLUTION OF ATROPIA.

In March, 1874, Mr. A. K., aged 72 years, in good general health, had cataract extracted from each eye, Dr. Hotz performing the operations. The day after extraction, the wounds were found closed, and a solution of atropia sulphate, 0.1 to 40., was ordered to be dropped into the eyes three or four times daily. On the third day slight iritis was noticed, when a solution of 0.2 to 40. was ordered to be dropped into the eyes once in two hours. The day following this the patient began to be delirious, and to the delirium was soon added all manner of absurd hallucinations, so that the attendant became alarmed, and thought the patient was coming down with fever or some other grave disease. The pulse was found rapid and feeble, skin flushed and dry, tongue dry and brown, great thirst and dryness of throat. The temperature was taken and found to be normal. This fact, of course, excluded the question of fever or severe inflammatory trouble. The next thought was that the old gentlemen had gone crazy.

The following night the delirium and hallucinations continued, so that the patient had to be restrained to keep him in bed and from tearing the bandage from his eyes. It had occurred to the attendant that the symptoms were those of belladonna poisoning, and when the local use of atropine was discontinued, and morphine was given internally in liberal doses, the patient quickly recovered.

In concluding these observations, I wish to repeat that these and other anomalous effects of atropine occur comparatively very seldom if we consider the frequent use of this alkaloid in ophthalmic practice. And while it is certainly very well for us to know that these incidents happen occasionally, and to remember the means by which to obviate or counteract them; they should not discourage us in the least from using atropine wherever its employment is indicated. For we must never forget that these exceptional results are outweighed a hundred fold, nay a thousand fold, by the good service atropine has done and always will do to people afflicted with diseases of the eye.

GLYCERIN OF THE OXIDE OF ZINC. F. Pollet.

Glycerine	16
Starch	8
Oxide of Zinc	1

Mix.

For the dressing of rhagades and chronic inflammation of the anus. Rhagades, which are little fissured ulcerations, situated in the natural folds of the anus, or frequently at the base of, or in the angle formed by mucous patches, vegetations or condylomata, often yield to simple cleanliness, to dressings with aromatic wine, or light cauterizations with nitrate of silver. It is when they are rebellious to these means that recourse is had to the glycerine of zinc. In point of fact, in order to obtain a definitive cure, it is first of all necessary to dissipate the lesions which give rise to the rhagades, and of which they are only a complication.—*L'Union Médicale.*

Clinical Reports.

ARTICLE V.

MERCY HOSPITAL.

REPORTED BY F. E. WAXHAM, M.D.

CASE I—*Stricture of Urethra.*

The patient entered the hospital Nov. 2d, with a very tight stricture. This had existed for twelve years. In 1862 he had an attack of gonorrhœa followed by gleet. Has had complete retention of urine several times, and was relieved only by tapping the bladder above the pubis. On entering the hospital, the stricture was so tight that nothing could be passed through it, although a No. 1 instrument entered a short distance. From day to day the attempt was repeated to pass the stricture, but unsuccessfully. On Nov. 6th complete retention occurred. After many trials and a great deal of patient labor, a very small filiform bougie was passed through the stricture into the bladder. This dilated his urethra so that he was able to pass water. Shortly after, he suffered a very severe urethral chill, followed not by fever but by a very copious perspiration.

Nov. 8th, complete retention again occurred. Patient suffered greatly from spasmodic contraction of the bladder. The pain and spasm were controlled by opiates and monobromated camphor, the latter in two decigram doses repeated every hour. Under this treatment he soon slept soundly, and passed his urine involuntarily while in this condition.

Nov. 11th. Anæsthetized, and internal urethrotomy performed by anterior and lateral incisions. A very small filiform bougie was first passed by the stricture and the free extremity attached to a staff, the former instrument curling up in the bladder and acting as a guide to the staff which followed it. The urethre-

tome was then passed down the groove in the staff, first anteriorly and then laterally, thus severing the stricture. A No. 10 sound was introduced into the bladder, followed by a No. 12 and No. 16. Shortly after the operation the patient suffered a very severe urethral chill. His temperature fell to 95½. He, however, had no repetition of these symptoms, and was discharged, cured, Nov. 20th, able to pass a full stream of water.

CASE II—*Stricture of Urethra with Perineal Fistula.*

Stephen Wright. Age 55. Entered the hospital with the following history: About five years since, while carrying a heavy weight on his shoulder, he fell across a well-curb, injuring his perineum very severely. He has suffered from gradually contracting stricture since that time. Last summer he was able to pass his water only drop by drop. In July infiltration of urine into the perineum and scrotum occurred. This being mistaken for erysipelas, a great amount of sloughing of perineum and scrotum took place before free incisions were made. The damage has gradually been repaired, but a small urinary fistula has been the result.

Nov. 11th. As it was impossible to cure the fistula as long as the stricture existed, urethrotomy was performed, as in the former case. A few hours after the operation this patient also suffered a very severe urethral chill.

Dec. 20th. Stricture has yielded completely, and fistula nearly healed; general health excellent.

CASE III—*Artificial Anus.*

Mrs. C.— Age 35. A year and a half ago the patient suffered from a strangulated inguinal hernia. Dr. Andrews being called five days after the strangulation occurred, found her in a very feeble condition. Although little hope of saving her life was entertained, she was operated upon, and six inches of dead intestine were removed. The healthy edges of the intestine were stitched to the opening, making an artificial anus. The patient made a gradual recovery.

On entering the hospital last April, she was pale and very anæmic. Nearly all the passages from the bowels were through the

artificial opening. Occasionally a very small passage would occur through the natural canal, showing that the lower portions of the bowels were still patulous. The first operation consisted in placing a clamp upon the septum of the intestine at the opening, thus removing it by gradual suppuration. Several operations were performed for the closure of the opening, each time freshening the edges of the wound and bringing them together by silver wire sutures, tightened by preforated shot or a lead button. This patient returned home in August with the opening nearly closed, it being no larger than a crow's quill. The patient returned Oct. 30th to have this small opening closed although there was but very little discharge from it.

Nov. 11th. The edges of the opening were pared off and incisions were made through the integument and cellular tissue about an inch from the wound on each side, that the freshened surfaces might be approximated. An opening was also made from the lower incision under the integument and areolar tissue to the opening in the intestinal canal, and a drainage tube inserted in order to give the old opening a better opportunity to heal. The freshened edges of the opening were then brought together by silver sutures. The operation proved successful.

Dec. 9th. Again anæsthetized and the whole surface of the old cicatrix removed and a flap two inches square taken from below on the thigh and layed over this. The edges were united by sutures all around, excepting on one side, where an opening was left communicating with the intestine. A drainage tube was inserted in this opening under the flap.

Dec. 14th. Patient suffered severely for several days, but at present date is doing well.

CASE IV—*Enlargement of Prostate.*

Peter Peterson. Age 59. Entered the hospital Nov. 7th, with the following history: He had always been healthy until a year and a half ago, when profuse hæmorrhage occurred from the urethra, lasting two days and prostrating him very much. Hæmorrhage recurred once or twice between that time and June 17th, 1878, at which date he bled until death seemed at hand. He has had increasing frequency of micturition until the present time,

when he frequently can not retain his urine longer than ten minutes.

Nov. 9th. Made an incomplete examination for stone. Found the prostate much enlarged, forming a tumor which nearly occluded the rectum.

Nov. 11th, the patient was anæsthetized and a thorough examination made. No calculus was discovered. The bladder was found contracted and its walls thick and grisly. The prostate was enormously enlarged, but it was thought to be probably a simple enlargement without possessing any malignant characters.

Nov. 29th. Left, somewhat improved under the effect of astringent injections.

NOTES FROM PRIVATE PRACTICE.

ARTICLE VI.

Poisoning by Strychnine.

On the morning of May 12, 1878, I was called to see a little girl, aged 9 years, who—as the messenger stated—was having spasms. Supposing it to be a case of convulsions from intestinal irritation, or other ordinary cause, I made no extra preparations, but at once obeyed the summons.

On my arrival I was quite surprised to find myself confronted with a very serious case—such as I had never seen before. By following a proper line of inquiry I was not long in arriving at a diagnosis, which, notwithstanding the protestations of the family to the contrary, was fully confirmed in a few hours by finding an old strychnia bottle with a few grains of the salt yet in it, and which the child afterward admitted she had handled. Any estimate of the amount she took, of course would be conjectural, and I will not give a detailed history of the symptoms. Suffice it to say that for four hours before I saw her, and for nearly ten hours afterward, she was in a continuous and persistent spasm, from head to foot, with an alarming and distressing opisthotonos, rendered all the more painful from the fact that she was entirely conscious of her suffering, while any effort to relieve her by the

slightest touch, or causing her to swallow, only aggravated her condition, by apparently exciting every muscle to increase its tension.

But the treatment adopted is the main object I have in view in reporting the case. I first prescribed .03 of morphia and applied hot water to the spine, but fearing the morphia alone would not be sufficient, I sent back to my office (5 miles) for other remedies, in the meantime continuing the hot water to the spine and, repeating the morphia every half hour. One and a half hours elapsed and, nothing gained, I then gave:

Flu. ex. belladonna	2	
Flu. ex. c. indic	2	
Morph. sulph		03
Elix. simpl	32	

M. Teaspoonful every hour alternated with the following:

Potassic bromide	6
Hydr. chloral,	3
Elix. simpl	32

M. Teaspoonful every hour.

This, though somewhat heroic, as I thought, for a small child, failed to relieve the patient as promptly as I desired, and I had almost despaired of her life, when an expression in one of Brown-Séquard's lectures occurred to me, in which he affirms that "Spasmodic action is due to unrest or a morbid activity of the cells of gray matter in the spinal cord and base of the brain, which results in the destruction of tissue and the exhaustion of nerve force," and he suggests as a remedy, friction, bandaging, or some other force or irritant applied to the extremities.

Acting upon this suggestion—in the midst of a severe convulsion—I grasped her thighs in my hands and used all the force I could in constricting them, when to my surprise and gratification she came promptly out of the spasm, and to some extent was relieved of the muscular stiffness and opisthotonos. To test this more fully, after a few minutes, I relinquished my grasp, and quick as thought she was in another spasm which was just as promptly relieved as before. Convinced of the value of this remedy, I detailed two men to keep up this pressure almost con-

tinuously for about four hours, thus preventing, as I now believe, "the destruction of nerve tissue" and brain force, and the consequent exhaustion of vital energy, until I could get my patient under the influence of powerful anodynes and nerve sedatives, and thus gain time, for I was now persuaded that time, and time only, under such influences, could save her.

To this end I persevered in the treatment—internal and external—alternating doses every 30 minutes, and giving the patient my own personal attention during the entire night.

At 5 a. m. on the 13th, I left my patient, with treatment all suspended, in a profound sleep, from which she awoke in about 6 hours, every way improved, and, save a little twitching of the muscles, at times, and some general muscular soreness, was free from the effect of the poison.

The point of special interest to me in the treatment of the case, was the promptness with which the patient was relieved by the suggestion as indicated in Brown-Sequard's lecture. There is no question in my mind but that it contributed largely to the successful issue of the case.

V. R. BRIDGES, M. D.

ARTICLE VII.

Is the Hypodermic Injection of Piles Dangerous?

About two and one-half years ago I discovered and published in this journal the secret method of the itinerant "pile doctors." The plan of these itinerants, which was sold as a secret, and at a high price from one quack to another, is substantially as follows: a hypodermic syringe, with a very fine, sharp point, is charged with a strong solution of carbolic acid. Generally three parts of crystallized acid to one of any bland oil are employed, but they sometimes combine them in equal parts, and for oil occasionally substitute glycerine. The method of the operation is to insinuate the point of the syringe into one of the piles and throw in a few drops only of the solution. This causes the hæmorrhoid to turn white and gradually to wither away. Another one is then attacked and thus by degrees a complete cure is effected without causing enough irritation at any one time to take the patient

away from business. The operation is sometimes painless, but in other cases decidedly otherwise.

Attention was called to the seeming danger that by this method the carbolized oil might be thrown directly into the dilated hæmorrhoidal veins. The injection of coagulants into venous enlargements of other parts of the body has, in a few cases, caused sudden death by embolism, a portion of the clot being carried to the heart and thence passing into and blocking the pulmonary artery. It was suggested therefore that the injection of hæmorrhoidal veins might involve the same risk. The three groups of hæmorrhoidal veins intercommunicate, but the main outlet of the lower and middle groups is to the internal iliac, and thence to the heart, while that of the upper is to the portal vein. It is conceivable that dislodged clots or globules of the injection might be swept by the current of the blood to the heart, or possibly might press through the upper plexus into the portal vein, and be lodged in the liver.

I learn that a number of the itinerants have taken warning from my suggestion of danger, and employ a sort of clamp forceps, to compress the base of the pile for a few moments at the time of the operation, thus hoping to prevent the passage of clots or globules along the veins.

This method has now been in use over three years, and has been applied to thousands of persons. If there be any actual danger in it, such as is suggested by anatomy, and by the dangers of similar injections in other regions, the results should be manifest before now. Experience only can settle such matters. If on the other hand the plan is safe, it ought at once to be adopted by the regular profession as the best method of dealing with this distressing disease.

To settle this question of danger I take the liberty, through the columns of this journal, of asking every physician in the United States, who has had opportunity to know the results of this treatment, to write me immediately, giving information upon the following points:

1. How extensively has the plan been tried in your region?
2. How far is the plan painless or otherwise?
3. Have any sudden deaths or other alarming symptoms been

known to follow its application, and if so how soon, and what were the symptoms?

4. Have any cases been followed by dangerous disease of the liver?

I propose to collate all the information thus gathered, and communicate the results in a future article through the pages of this journal.

EDMUND ANDREWS, M.D.,
Prof. of Surgery in Chicago Med. College,
No. 6 Sixteenth St., Chicago, Ill.

ARTICLE VIII.

Tincture of Thapsus.

As an efficient remedy for functional derangement of the uropoëtic system, a condition whose organic cause eludes analysis, I have for some time been in the habit of prescribing the tincture of thapsus bursa pastoris, or shepherd's purse, a genus of cruciferous plants. I treat with it not only hæmaturia, for which, on account of its astringent properties, it was formerly used, but cases of renal and cystic derangement very various in their nomenclature; but always this side of any considerable destructive lesion. I desire to draw to it the attention of the profession, because I believe it is a remedy not generally known. It has long been a favorite remedy with the so-called "eclectics," whose leading pharmacist first called my attention to it.

DR. JAMES I. TUCKER.

TREATMENT OF WHOOPING COUGH BY TINCTURE OF MYRRH. By Campardon.)

Whooping cough yields easily and rapidly to the alcoho c tincture (15 drops to the tablespoonful) in quinine wine or Vichy water. A tablespoonful every hour or two. This treatment in no way interferes with the appropriate remedies for the tracheobronchitis or the pulmonary congestion.—*Bull. Thér.*

Society Reports.

ARTICLE IX.

TRANSACTIONS OF THE CHICAGO GYNÆCOLOGICAL SOCIETY. SECOND MEETING, NOVEMBER 29TH, 1878. W. H. BYFORD, M. D., in the chair.

DR. SAWYER reported a fatal case of puerperal inversion of the uterus (published in the present number of the JOURNAL AND EXAMINER).

DISCUSSION.

DR. MILLER: The subject introduced this evening by Dr. Sawyer, is one of more than ordinary interest to every accoucheur. The report of the case is admirable, and the specimen presented adds greatly to its value. I have no criticism to offer in regard to the management of the case, for it was faultless. The accident happens but seldom. It was fortunate that in this case it occurred under the immediate observation of one so competent to comprehend its gravity from the initial stage, and who could present to us so clearly its complete history.

The causes of inversion of the uterus are various — generally, I believe, mechanical; not always so, however. I can appreciate that inversion may take place as follows: The uterus in a state of complete inertia, from long continued labor, from too sudden delivery of the child, or from over-distension, as in Dr. Sawyer's case, a slight cause may produce depression and end in inversion. That cause may be the increased weight of that portion of the uterus upon which the placenta was developed, if near the fundus, together with the other condition which obtains at the site of placental development, namely, the projection inward of that part of the uterus. The structure of the uterus, immediately surrounding the placental site, in the condition assumed, could

offer no resistance to the further settling internally by gravity of this heavy circumscribed portion of the uterus — depression having occurred, inversion would follow.

Another possible cause of inversion may be mentioned, though not strictly applicable to the case reported this evening. When the uterus is in a state of complete inertia, and the placenta has been detached, and has lodged within the os uteri, the cavity of the uterus, as is usual in such cases, remains large, and is filled with blood. The extraction of the placenta will act as a piston upon the volume of blood in the cavity of the uterus, and this, in turn, will act upon the flaccid wall of the uterus; the fundus may follow this forcible extraction of blood, till depression is produced. Then inversion may be completed by the uterus itself.

I am not certain that attempts at compressing the uterus may not produce a dimpling of the organ that will lead to inversion, especially if performed carelessly, or by a person not familiar with the physiology of uterine contraction. It appears to me that inversion is liable to be caused by the injudicious application of force to the uterus in a state of inertia.

DR. ROLER: The case presented for discussion is an interesting one, but the cause of the inversion cannot be determined, as the attending physician has no knowledge of the exact moment of its occurrence. The delivery of the placenta evidently had nothing to do with the accident, as manipulation immediately afterward detected the outline of the uterus in a flaccid state, the fundus being near the umbilicus. Ergot was administered, and firm pressure applied both over the uterus and upon the abdominal aorta. A little later, when contraction suddenly occurred, the cup-shaped depression was easily recognized by the hand over the abdominal parietes.

The fundal sinking must have taken place before contraction set in, as symmetrical action of all the muscular fibers would insure safety against such an accident. The condition of ergotism may have been the chief cause of failure in the attempted reposition of the uterus, but the administration of the drug was clearly indicated, and Dr. Sawyer did as any intelligent physician would have done under the circumstances.

I fully endorse the remarks of Prof. Miller with reference

to careful manipulation in the removal of the placenta, even after uterine action has thrust it into the vagina. Leishman, J. Matthews, Duncan, and others, state that if left alone it usually presents edgewise during expulsion, but I think the bedside experience of every physician proves that without meddlesome interference it is often found fœtal surface foremost, and "impacted" in the vagina. Of late years I have always, when removing it, waited until I found the uterus well contracted above the pubis. It ought to be brought out edgewise and slowly. Traction upon the cord would cause a vacuum above, which would be filled with blood from the open sinuses, or if atony was present, possibly by depression of some part of the uterine wall.

In regard to the forces which operate to bring about complete inversion, I would like to state my doubts as to the ability of the organ, by any contractile power, to invert itself. I am aware that it has become an accepted doctrine that the introverted part may be seized by the remaining portion, and be carried downward, thus completing the process by its own action. I do not think it has been satisfactorily proven by any one who has written on the subject. In what way can any expulsive force be developed when the fundus is not acting? It is a matter of common experience when the uterus fails to contract symmetrically, in any stage of labor, that the expulsive process is arrested. In irregular contractions, even the detached placenta is held in vice-like grasp until artificially removed. If the introverted part contracts, it shortens itself merely. If the encircling portion acts, the further descent must certainly be arrested by the grasp of the circular fibers. Are not the incomplete varieties owing to this fact? When general atony exists, the weight of the descending portion, aided by the straining on the part of the patient, will easily carry the fundus into the vagina.

Irregular contraction is doubtless a primary condition in many cases, of incomplete inversion, the placental area being the paralyzed portion, and sinking downward either from spontaneous or artificial causes. Yet, even in these cases, it can easily be understood how the shock thus produced, together with hæmorrhage, might subsequently cause general relaxation and allow further descent of the fundus.

DR. MERRIMAN was very much interested in the case, which had been reported in so clear and minute a manner. These dangers, although rare, were liable to occur at any time, and there was need to observe as closely as possible all circumstances connected with them, that the causes of the trouble might be more perfectly understood. He did not remember having seen an explanation offered for the first step in the process of inversion, namely, that of depression, except: 1st, the presence of a polypus; 2d, drawing upon an adherent placenta; 3d, pressure from above; but these were evidently not the only causes. Dr. Barnes gives as a circumstance frequently connected with this difficulty, the attachment of the placenta to the fundus uteri. Since the placenta undergoes absolutely no detachment during the strong contractile efforts of the uterus during labor, it seems probable that the placental seat is less affected generally by uterine contraction. If, then, the attachment should be at the fundus uteri, and an unusually relaxed state of the uterus exist, a very little pressure would be sufficient to start a depression which, once started, would readily go on from the contractile efforts of the uterus itself.

He thought of one other explanation. If irregular contractions should occur, they might affect only the external fibers of the uterine fundus, and it would readily be seen that this circumstance would cause the wall of the uterus to bulge inward, thus producing the initial step in the process of inversion. He thought, in this connection, that the effect of ergot, which is so liable to produce irregular contractions of the uterus, should be carefully watched.

DR. NELSON: It has not been my fortune yet to see a case of puerperal inversion of the uterus, but I can readily understand that the piston-like action of the placenta, referred to by Dr. Miller, might be, in a relaxed condition of the uterine walls, a cause of partial or complete inversion, if the cord were drawn upon while the uterus was thus relaxed. For this reason I make it a rule never to attempt to remove the placenta until the uterus is contracting firmly. Then, if gentle traction on the cord, or the presenting portion of the placenta, does not readily extract it, and especially if it seems to be firmly held, while the fœtal sur-

face presenting at the os shows that it is at least partly detached, I bore through the presenting placental mass with the forefinger, to allow the air to pass through the placenta, and thus destroy this sucker-like action, and then the contents of the uterus may be readily removed. But until this is done, or in some way the air allowed to get behind the placenta, traction upon it or the cord will simply drag downward the uterus and its contents until the uterine contractions excited thereby expel the contents. I do not recollect to have seen this procedure described in any of the books, but I have, for several years, found it to greatly facilitate the removal of the placenta.

Dr. Sawyer's exact description of this case suggests also another possible cause of inversion, when the uterine walls are distended and relaxed, namely, pressure upon the uterus through the abdomninal walls by an assistant, especially if unskilled. For I well remember, in assisting Dr. Roler in a footling case, under ether, while pressing firmly upon the fundus of the uterus to hasten the delivery of the head and so save the child, I distinctly felt the walls of the uterus dimple under the pressure, especially when too great force was momentarily exerted by the thumbs and finger points in attempting to relieve the hand, and while the uterus was not firmly contracting. Indeed, the inertia of the uterine walls was the very reason for using these vigorous external means to hasten delivery

Dr. Sawyer describes the compression of the aorta from the outside, which seems to have been satisfactory in his case; but, if the abdominal walls contain much adipose tissue, it might be more difficult. Following the teachings of my preceptor, Dr. Storer, of Boston, I should prefer to pass the hand directly into the uterus, and compress the aorta through the thin uterine walls. I have not found it difficult to introduce the hand into the uterus immediately after delivery, and the aorta can certainly be as safely compressed in this way upon the spine. Furthermore, the hand itself, in the uterus, will be a powerful means of exciting the uterine contraction, and should any portion of the walls be inverting, it would be in the best possible position to detect and replace it. It is also in position to detach the placenta, if this may have been the cause of the hæmorrhage, or to remove clots

resulting from the hæmorrhage. I have had occasion to compress the aorta in this way but once, and saw no bad results.

As the tetanic contraction of the uterus was described in Dr. Sawyer's case following the use of ergot, the query came to mind, will the use of ether, carried to complete anæsthesia, in such cases, overcome the action of the ergot?

I would also like to ask the members of the society what their experience is in the use of the corn ergot—the fluid extract of ustilago maidis; will it produce, in full doses, these same tetanic contractions which the rye ergot frequently does? I have used the fluid extract of ustilago in my obstetric practice during the past year and a half, using it as I would the rye ergot, in doses of half a teaspoonful and more, and I have not yet seen the severe contractions occasionally produced by the rye ergot; neither is it as liable to disturb the stomach as that—perhaps because the taste is usually not as disagreeable to the patient.

DR. JONES said that he had little to add to what had already been said as to the etiology of inverted uterus.

During the discussion, it had occurred to him that possibly, as in early abortions, a certain balooning of the upper vaginal and lower uterine ligamentous structures might occur after parturition, which would draw apart the inert walls of the womb, and suffer the flaccid fundus and upper segment of the organ to fall into the cavity thus made. Then, under the stimulus of invagination, active contraction, grasping the inverted portion, might be set up, which would tend to complete the "perversion," or render it impossible for the attendant to effect its reinstatement. It was possible that the ergot administered in the case reported might have proved a disadvantage, but that it had anything to do with the causation of the accident, he could not believe. He agreed with other speakers in thinking inversion due mainly to uterine inertia, and that the uterus was not primarily active.

As for the commonly assigned cause—traction upon the funis—he averred his constant practice of that forbidden means of delivering the placenta, but always with the premise of normal uterine contraction. A case of puerperal inversion of the uterus had never occurred in his own practice.

DR. FITCH: I regret exceedingly that I did not arrive in time to hear the opening of this discussion, and the history of the case presented by Dr. Sawyer. My experience in puerperal inversion of the uterus has been very limited; indeed, in an active practice of twenty-seven years a case has never occurred under my own administration.

The only case I ever saw was in consultation. About twenty-two years ago, I was called to see a woman four or five days subsequent to her delivery. I found the patient of light complexion and frame, pale and haggard countenance, pulse 130 to 140, and feeble; skin cold, and covered with a clammy perspiration. Her labor was apparently normal. No excessive hæmorrhage had occurred, and no great degree of pain; yet there was constant vomiting, and great prostration. The physician in attendance had made no diagnosis, but supposed she had "child-bed fever."

I proceeded to make an examination per vaginam. The uterus was low in the pelvic cavity; os open to the size of a silver dollar, and a hard, somewhat roughened convex body presenting, which I at once suspected to be the fundus uteri. I immediately applied firm pressure with two fingers against this body, and counter pressure upon the abdomen, for the space of five minutes; the body gradually receded from the os, and suddenly left my fingers, with a decided thud; at the same instant the uterine tumor appeared in the hypogastria. The vomiting ceased at once; reaction quickly came on, and the patient made a good recovery.

In regard to the influence of ergot in the production of this accident, I believe that its action is upon the entire organ, producing uniform contraction of its muscular walls; therefore cannot favor the accident. My judgment is based on the use of it in probably 75 per cent. of all the cases I have attended during the past twenty years. I believe it is useful in assisting the delivery of the placenta; and further, by producing tonic contraction, it thoroughly empties the uterus, and prevents accumulation of blood in its cavities. For these purposes it is given from 10 to 20 minutes before the completion of the second stage of labor.

I have entertained the opinion that acute puerperal inversion was unnecessary; and that, when it did occur, it was usually due

to neglect in the management of the delivery, or by too active interference.

To avoid this accident, as well as post-partum hæmorrhage, I am in the habit of pursuing the following course: As soon as the child's head is delivered, I direct the nurse, or other convenient person, to apply the hand to the hypogastrium, and follow the receding walls of the abdomen, with pressure directed upward and backward. The person is retained in that position till I have attended to the child, tied and severed the cord. I then place the patient on her back, and apply my free hand to the abdomen, over the uterus, grasping the organ with the thumb and two or three fingers, with the little finger resting on the fundus, for the purpose of promptly detecting any depression or dimpling. If the uterus does not contract promptly, I squeeze it forcibly. As soon as contraction occurs, I apply traction on the cord, equal to a weight of one half lb. to six lbs., at the same time pressing the lateral walls of the uterus, for two purposes: 1st, to assist in the expulsion of the placenta; 2d, to sustain these walls in apposition, and thus prevent inversion. Should dimpling be felt, I at once desist from traction; or should tearing be felt in the cord, traction should cease. I have never torn off a cord or inverted a uterus.

DR. ETHERIDGE remarked that the specimen before the society seemed an unusually large puerperal uterus.

DR. JACKSON had nothing to add to what had already been said in reference to inversion of the uterus. He had never been so unfortunate as to encounter a case in his own practice, and the specimen now before the society was the first he had ever seen. He only desired to express his surprise at the opposing views to which utterance had been given in reference to what should constitute the proper treatment of the third stage of labor, in its bearings upon the causation of the accident in question. One gentleman considered it dangerous to make pressure upon the fundus of the uterus in order to aid the expulsion of the placenta, while another thought this method the best and most favorable. Several regarded traction by the cord as highly dangerous, while others again, on the other hand, habitually delivered by pulling

at the cord, and only limited the strength of the pull by the strength of the cord.

A number were in the habit of administering a dose of ergot to aid the expulsion of the placenta, while another was afraid to give it lest it should not be expelled at all.

Inversion of the womb was usually considered to be a very rare complication of labor; and yet, after listening to this discussion, it seemed wonderful that it was not a very common one. He thought the efficiency of some of the alleged causes was exaggerated. Certainly traction of the cord was. If it ever caused inversion, it must be only in exceptional cases; for he believed that fully 90 per cent. of all placentae were delivered by more or less traction by the funis. His own impression was, that puerperal inversion occurs usually from a passive, inert, relaxed condition of the uterine walls, produced by over-distension, as in the case described by Dr. Sawyer, or from some other causes.

DR. W. H. BYFORD believed that mere atony of the uterus was not a sufficient cause of inversion of the uterus. This condition might be a predisposing cause, and it was probably in this state of the womb that pulling on the cord and other injudicious efforts to deliver the placenta were rightly blamed as causes of inversion. He thought, however, that inversion more frequently resulted from irregular contraction of the uterus, in the sense that some of its fibers were acting strongly, while others were not contracting at all. In other words, there was partial, instead of general atony; one or more patches, limp and flabby, prolapse into some part of the globular arch of the contracting organ, and thus form the dimple so generally supposed to be necessary as a start toward inversion. The vehemence of contraction which this intruding portion would cause, is recognized by most writers as sufficient to complete the displacement. This state of partial atony must occupy fibers partially paralyzed by some circumstance existing during gestation, or occurring at the time of labor.

In the case of Dr. Sawyer, reported with so much intelligence and minuteness, the condition of the uterus anterior to delivery was sufficient to account for a weakened state of the fibers. There was a very considerable dropsy of the chorion, and the

uterus contained an extraordinary amount of liquor amnii. This fact, interpreted, means that the fibers were *stretched*. In normal pregnancy the uterine fibers are not stretched; the whole organ is hypertrophied, and the actual addition of tissue, or growth of the muscles of the uterus, form a receptacle for the ovum that contracts uniformly and with vigor for the expulsion of its contents. Now, if an abnormal amount of fluid is secreted, it is accommodated not by a further increase of the muscular tissue forming the uterine globe, but the organ is *distended*, and the muscular wall becomes thinner by the distension. Thus stretched and thinned, for perhaps weeks before confinement, the fibers become weaker, and the labors succeeding this state of things are precisely the kind described by Dr. Sawyer. The contractions are painful and inefficient, the fibers acting discordantly until the fœtus is expelled or removed, as it was in this case. It is almost certain that the efficiency of some portions of the fibers is more impaired than that of others. It is well known that in uteri thus over-distended we have the hour-glass contraction — the incomplete contraction — accompanied by hæmorrhage, etc., and why not also inversion ?

If the ergot had any injurious influence in the reported case, it was not in causing the inversion, but in rendering the fibers more resistent to efforts at reposition. Dr. Byford further said that the treatment instituted by Dr. Sawyer was such as would suggest itself to most intelligent obstetricians.

It was quite apparent, however, from the tenor of the discussion to-night, as well as the diverse theories of inversion promulgated by writers on obstetrics, that there is yet much to be learned in reference to this most interesting subject.

With reference to the cause of death, he thought there could be no doubt but that it was due to shock, and the hæmorrhage was not sufficient to contribute materially to that end. In expressing this opinion, he would remind the society that the overwhelming influence of shock upon the nervous system depended as much upon the incapacity of certain persons to rally from nervous depression, as upon the force of the causing influence. What would kill some persons would not, on account of the inscrutable elasticity possessed by others, have any effect upon them.

Dr. SAWYER: I feel indebted to the Fellows for the full and very intelligent discussion which my report has elicited, as well as for the very charitable willingness which has been shown to exonerate me from responsibility in the unfortunate termination of the case. The only point which was raised in my mind upon reflection, was concerning the administration of ergot; not that its use in any degree caused the inversion; there is not one fact which could suggest such a presumption, but that the condition of tonic spasm of the uterus, which prevented the immediate reduction of the displaced organ, might have been excited by the drug. I am assured, however, by the remarks which have been made, that such a spasm might have been induced by the presence of the fundus in the cavity of the uterus. In this they are confirmed by no less an authority than W. Tyler Smith, a reference to whom has been made in my report.

The remark made by Prof. Miller, viz: that the fundus may be indented by the tips of the fingers, when compression of the uterus is injudiciously made, I hold to be of paramount importance. In this connection I may be permitted to allude to the dangers attending Credé's method of expressing the placenta. In using this method, we are instructed to seize the uterus in both hands, and to squeeze out the after-birth. Practically one does not compress the uterus uniformly in all its axes; the abdominal parietes render the posterior surface of the organ inaccessible, and the tips of the fingers are forced to press upon the fundus. Now, under certain conditions, is it not reasonable to suppose that the paralyzed fundus may be indented in this manner? In fact, I have no question but that, in the case under discussion, the point of departure was in the compression which was used under my direction.

The plan of compressing the abdominal aorta from within the uterine cavity, alluded to by Dr. Nelson, has long found a place in the literature of the subject, and is spoken of by Cazeaux. When the uterus is large, the procedure has the advantage claimed for it, namely, that of quickly recognizing any descent of the fundus. But it is an agonizing operation. Moreover, in order to compress the artery, the hand must be carried above the fourth lumbar vertibra, or nearly to the umbilicus, and this interferes with the

proper retraction of the uterus. On this account, I give preference to compression through the abdominal parietes.

Concerning the cause of puerperal inversion, all observers have remarked that unusual distension of the uterus, as exists in some cases of multiple pregnancy, and in dropsy of the amnion, is a condition which favors the accident. But upon the initial step in the process of inversion, the profession seems divided. One class of observers hold that it is a condition of irregular contraction of the uterus, whereby it is inverted; in other words, that the process is an active one in its very beginning. Prof. Byford has very clearly given us the *modus operandi* of this process, for which he has expressed his preference. It is especially dwelt upon by W. Tyler Smith, its author, who has likened the process to inversion and intussusception of the intestine, upon the one hand, and speaks of its relations to spasmodic rigidity of the os uteri, and so-called hour-glass contraction with retention of the placenta. It may be said, in support of the active process, that the virgin uterus has been known to invert itself by unceasing contraction of the organ.

Another class of observers believe the first step in the process to be passive, so far as the uterus is concerned, and that the fundus falls into the body by its own weight, or is pushed, or drawn downward through some external force.

I am impelled to accept the latter as correct. It is true that I can only speak upon the authority of a single case, but it will be conceded that the opportunity for observation was as good as it was rare. At a given moment, I felt the outlines of the symmetrical but flaccid uterus, its fundus reaching nearly to the umbilicus. Shortly afterward, the organ had contracted, and its fundus was gone. Now, what occurred in that short interval? Of course positive knowledge is precluded, because the fundus of the uterus cannot be inspected, and my hand was not in the cavity of the organ. But of one thing I feel convinced, namely, that there was no contraction, partial or complete, of the uterus before the fundus had fallen. In reality, the recognition of the contraction and the discovery of the absence of the fundus were simultaneous. From this moment, however, till the last, the uterus was in a state of tonic spasm. Had the victim survived the

shock, I can easily understand how this contraction may have propelled the fundus, and have made the inversion complete.

There is one other condition which I think can have an influence in determining this accident. Dr. Merriman has called our attention to a predisposing cause laid down by Barnes, namely, the location of the placenta at the fundus. I desire to ask the Fellows if it ever occurred to them that the location of the placenta at the fundus is extremely infrequent, quite as accidental, and, it may be, as rare as its location in the cervical zone? Perhaps in this fact Dr. Jackson, and others, may find one explanation of the great rarity of puerperal inversion of the uterus. I have many times determined the location of the placenta, through the uterine souffle, but have never yet found the area of the greatest intensity of the souffle to be at the highest part of the uterus. I regret that the location was not ascertained in the case before us.

The usual site of the placenta, in the right or left lateral half of the uterus, upon its anterior or posterior wall, I hold is not a matter of chance, but is determined by a condition of the uterus which obtains in the very earliest days of pregnancy.—You will recall that when the impregnated ovule reaches the cavity of the uterus, it finds the lining of the organ, the decidua, so swollen that the walls of the uterus are in apposition, and no cavity can be said to exist. Observation has shown, however, that the nearest approach to an unoccupied space within the uterus, is at the superior angles of the organ. When the ovum escapes the uterine opening of the Fallopian tube, it is not impelled to insinuate itself between the apposed deciduæ, but attaches itself naturally at the upper angle of the body, where, as we have just seen, there is the most room. It is the attachment of the ovum which determines the location of the placenta.

After the third month of pregnancy, the fundus of the uterus contributes most in forming the increasing cavity of the body. So disproportionate is this growth that, at the end of pregnancy, the Fallopian tubes seem to be attached to the uterus in its lower third, instead of near the superior point, as in the unimpregnated state. The placental site remains the same, and though it may increase in size by its own growth, it can never be carried upward by the gradual ascent of the fundus. I am aware that

when the empty uterus contracts upon itself after delivery, the highest border of the uterus very nearly approaches the placental site; still then the greatest portion of the latter will be inferior to a line drawn between the uterine opening of the Fallopian tubes.

If my reasoning is well founded, the conservative design of nature must be acknowledged; for we are told by Barnes that a momentary paralysis of the placental site usually exists after labor, and Prof. Miller has said that the uterine tissue is thicker and heavier at that point. I cannot but think that this paralyzed, heavy area would very frequently descend from its normal plane, if the site were at the highest part of the uterus. But, grace to the fact that the site is mostly upon the side of the spheroid, its tendency is to fall outward.

I am not aware that these views have been expressed by others, but I have held and communicated them to my class for three years, and have confirmed the observation concerning the usual site of the placenta by many auscultatory examinations.

I desire again to thank the society for the interest which has been shown in the subject and specimen introduced by me.

ARTICLE X.

INDIANA, ILLINOIS AND KENTUCKY TRI-STATE MEDICAL SOCIETY.

The fourth annual meeting was held in the Hall of Representatives, in the city of Springfield, Ill., Nov. 13, 14 and 15, 1878.

The society was called to order at 11 a. m., by the president, Dr. James F. Hibbard, of Richmond, Ind. The session was opened with prayer by Rev. G. H. Fullerton.

Judge J. H. Matheny, on behalf of the citizens of the State and city, made a brief speech of welcome to the Society, paying a high tribute to the pioneers of our profession.

Dr. Theophilus Parvin, of Indianapolis, responded to the judge, in a brief and eloquent speech.

Dr. B. M. Griffith, chairman of the Committee of Arrangements, submitted his report, which was adopted. The report

gave the order of exercises and the programme for each day; it also stated: "This society has no ethical matters to discuss, not proper in any medical organization, its sole object being the reading and discussion of scientific papers and cultivating professional sociability." And yet, none are received to membership who are not members of some local society auxiliary to the American Medical Association.

After calling the various committees, the society adjourned to 2:30 p. m.

AFTERNOON.

Dr. Hibbard, the president, delivered the annual address, which treated at some length of the functions of the nerves and of the brain.

Dr. David Prince, of Jacksonville, read a paper on the "Metric System." The reader gave illustrations upon the blackboard, and explained the practical advantages of the system.

Dr. J. M. Holloway, of Louisville, read a paper on "Muscular Rigidity—a Symptom, Cause or Result of Disease." The doctor reported several cases in illustration.

Adjourned to 7:30 p. m.

EVENING.

Dr. J. Adams Allen, of Chicago, delivered a public address on the "Nervous System."

Dr. J. W. Singleton, of Paducah, Ky., read a paper on the "Medical Heroism" of 1878. The doctor recounted the sacrifices made by the members of the profession in the great scourge of the year. It is to be hoped that the entire profession will pay the tribute due to the memory of "our fallen heroes." Who can say that the bravery of Cook, Reuter, Rodgers, Saup, Easley, Woolfok and hosts of others, who Christ-like gave their lives for men, has ever been excelled?

Adjourned to 9 a. m.

NOV. 14.—SECOND DAY.

Dr. T. Parvin, Indianapolis, read an interesting paper on "Perineoplasty." The doctor reported several cases of perineal rupture treated by this method.

"Modes of Administering Mercury in Syphilis," was the subject of a paper by Dr. J. W. Thompson, of Paducah, Ky.

Dr. J. S. Hodgen, of St. Louis, read an exhaustive paper on "Section of the Superior Maxillary Nerve." The various surgical operations resorted to in the treatment were presented and clearly illustrated by suitable drawings.

AFTERNOON.

Dr. Thos. F. Rumbold, St. Louis, read a paper on the "Treatment of Scarlatina," dwelling at some length on mechanical therapeutics.

Dr. J. S. Jewell, of Chicago, reported on recent researches in the anatomy of the spinal cord.

Officers for the ensuing year were elected as follows: President, Dr. J. A. Ireland, Louisville, Ky; 1st Vice-President, Dr. J. W. Compton, Indiana; 2d Vice-President, Dr. B. M. Griffith, Illinois; 3d Vice-President, Dr. J. M. Holloway, Ky. Secretary, Dr. G. W. Burtal, Mitchell, Ind.; Assistant Secretary, Dr. H. H. Dening, Pana, Ills.; Treasurer, Dr. F. W. Beard, Vincennes, Ind.

Chairmen of Sections.—Surgery, Dr. J. M. Keller, Hot Springs, Ark.; Practical Medicine, Dr. S. H. Charlton, Seymour, Ind.; Obstetrics, Dr. H. B. Buck, Springfield, Ills.; Gynæcology, Dr. J. W. Singleton, Paducah, Ky.; State Medicine, Dr. Thad. M. Stevens, Indianapolis, Ind.; Pathology and Microscopy, Dr. S. L. Mathews, Springfield, Ills.

Chairman of Committee of Arrangements for 1879.—Dr. A. M. Owen, Evansville, Ind.

Time of next meeting, first Tuesday in November, 1879; place, Evansville, Ind.

A paper on "Pelvic Cellulitis," was read by Dr. J. A. Ireland, Louisville.

"Finger Stumps" formed the topic of the next paper, by Dr. H. C. Fairbrother, East St. Louis.

Adjourned to 7:30 p. m.

EVENING.

Dr. E. H. Gregory, of St. Louis, read a paper, entitled, "What is man?"

Adjourned.

By special invitation, the Society attended a reception at the Executive Mansion. His Excellency the Governor, Mrs. Cullom and their daughters, gave the society a welcome that will be a pleasant recollection to every member in attendance.

NOV. 15.—THIRD DAY.

Dr. Thad. M. Stevens' paper, "Some Thoughts on Certain Medico-Legal Questions," was read by title.

Dr. Sarah H. Stevenson, of Chicago, read a paper entitled, "Education of the Senses."

Dr. J. M. Keller, of Hot Springs, Ark., read an interesting paper on "Yellow Fever." The Doctor believes that "national quarantine" is the remedy for this terrible scourge.

Dr. J. W. Compton, of Evansville, followed, in the afternoon session, with a paper on the same subject. He believed the poison was solid, but not of any form of life; that it attached itself to walls and exposed surfaces. He believed the only preventive was a strict quarantine, and a stringent local enforcement of sanitary measures.

A Committee on Quarantine was appointed by the chair, to report at the next annual meeting, consisting of Dr. J. M. Keller, Hot Springs; Dr. D. H. Chase, Louisville, Ills.; and Dr. E. S. McIntire, Mitchell, Ind.

The papers, after discussion, were all referred to the Committee on Publication.

A number of papers were read by title and referred.

Society adjourned to 8 p. m.

According to previous notice, the work of the Society was to conclude with a microscopic exhibition, under the management of S. L. Mathews, chairman of section on Pathology and Microscopy. There were present thirty-five instruments, and objects of every description. Jacksonville Microscopical Society, fourteen in number; the first was a monocular, in charge of Dr. H. K. Jones; object, the circulation of the blood in a frog's

foot. Dr. G. V. Black, with his binocular, exhibited the circulation of the blood in the lung of the frog. Miss Fuller exhibited ocean shells; Dr. Pitner, viscera of rabbit; Mrs. Mulligan, pollen of lily; A. E. Prince, fly and spider's eye; Miss Rhodes, living hydra. Several other instruments, in charge of Drs. Frost, Winslow, Corwin and others. Dr. Mathews manipulated nine instruments, namely: the Henry Crouch, great binocular, the intermediate, the student's monocular, the educational monocular, the queen binocular and monocular, and two of Bullock's monoculars, of Chicago. Dr. M. exhibited trichinæ from pork; itch mite, human blood, deep sea soundings, etc. Close by was Dr. V. S. Lindsay, with his Hartnack monocular, and about fifty pathologico-anatomical specimens. Near him was the writer, with Ross monocular, specimens all pathological. Next came the tables of the Chicago society, two instruments in charge of Dr. Danforth, who also exhibited the circulation in the frog's foot, lung and the action of the heart. J. G. Langguth had ten instruments, with every variety of mounted objects; the most interesting was a living trichina.

With a vote of thanks to Governor Cullom, the citizens of the State and city, the society adjourned, to meet in the city of Evansville, Ind., first Tuesday in November, 1879. B.

A CHEERFUL PROSPECT FOR PHYSICIANS IN CHICAGO.—The Chicago organ of one of our religious "denominations," urges its readers to promote the social element in the church by following the example of a family where there was an informal social gathering. "No refreshments were served, but at one corner was a table with cold water, popped corn, raisins, walnuts and doughnuts."

There is a demand for ostrich pepsin in the retail drug trade; and it is understood that the homœopathists are preparing a tenth decimal trituration of "cold water, popped corn, raisins, walnuts and doughnuts."

Foreign Correspondence.

ARTICLE XI.

CLINICAL NOTES FROM THE SERVICE OF PROF. PÉAN, HÔPITAL SAINT LOUIS, PARIS.

Though Prof. Péan is not a very dashing or brilliant operator as far as the mechanical execution of his surgery is concerned, yet as a teacher he is undoubtedly one of the first, if not the very best in Paris.

The Saint Louis, which contains 853 beds, is situated in the midst of a great manufacturing district of the French capital, and is devoted mostly to surgical cases.

This great amount of material is systematically arranged and presented for the purpose of teaching. Cases are grouped together in such a manner that we are generally able to see several patients affected with the same disease during a single day, as well as the operations done on them.

Tumors and other morbid growths are studied first in their general aspect, and then microscopical specimens of the same are prepared which all have a chance to carefully examine.

On Saturday, Nov. 2d, the first cases brought into the amphitheatre were two women suffering from uterine fibroid.

The Professor said: "I bring before you to-day two cases of disease among the most interesting known to the domain of either medicine or surgery; interesting because we are sometimes able to do wonders in the way of curing our patient, and at others are absolutely helpless to render her the least assistance.

"The first thing to be done when a case of uterine fibroid presents itself to you for treatment, is to ascertain by a careful

examination the exact location of this growth in its relation to the uterus itself. In other words, Is the tumor extra-uterine, intra-mural or intra-uterine? The first of these cases that will occupy our attention is a woman 36 years of age, who has borne one child, now fifteen years old. The tumor, in her case, though occupying the interior of the womb, is attached and bound down to the walls of the uterus in its whole extent by the mucous lining of that organ, and is therefore termed a sub-mucous fibroid. It is as large as a child's head one year old, and occupies one side and the posterior aspect of the uterine cavity.

"When the patient presented herself to me three weeks ago, she had been flooding for many months, and was consequently very anæmic.

"Although in the management of these cases there is no single line of treatment that has not its advocates and its opponents, yet all, I believe, are agreed that a thorough dilatation of the mouth of the womb exercises generally a beneficial influence at least upon the hæmorrhage that is so often one of its most dangerous and perplexing symptoms. A great many devices have been used to effect this object.

"The one that I prefer, and the one which I practiced on this patient three weeks ago, was to incise the mouth of the womb freely with Dr. Paquelin's thermo-cautery. I first make my incisions laterally, and if they do not open the parts sufficiently freely I also incise the anterior and posterior lips.

"The advantages of this procedure over the knife or the scissors are that you have no hæmorrhage, and also that your cut surfaces do not so readily heal as they do when made by a cutting instrument.

"After I operated in this manner on this woman, she nearly ceased flooding, and has lost but little blood since.

"I shall now proceed to perform the next step in the operation in this case, as the womb is now well open, and I can get free access to the tumor. This second step in the management of our case consists in puncturing this mass at several points with the conical point of the thermo-cautery."

He then produced anæsthesia with chloroform, introduced a large wooden cylindrical speculum, after which he punctured the

fibroid mass at three points with his thermo-cautery, introducing it to a distance of about six centimeters. He then proceeded to incise the mouth of the womb in the second case as he had done in the first, and proposes to treat her, after a few weeks, in the same manner as he did the first case described.

I saw the first of these patients twice after she was operated on. She had a good deal of discharge from the uterus, though an insignificant amount of constitutional disturbance. At the end of two weeks she was sent out of the hospital, to remain for a month, at the end of which time she will return and have the operation of puncturing this tumor repeated.

Prof. P. claims that in several cases this mode of treatment has been very successful in his hands, the reaction produced by the introduction of the cautery leading to the absorption of the morbid growth.

Carl Braun, of Vienna, would manage a case like this by first dilating the mouth of the womb well with a sponge tent and then making a free incision through the mucous covering of the tumor from top to bottom, then giving ergot freely to bring on uterine contractions.

Prof. Shröder, of Berlin, is opposed to meddling with these cases in any way if they are very anæmic until improvement in the general condition of health has been obtained. He has, he says, so often seen the most disastrous results follow the least disturbance of these cases where the patient is very bloodless, that he dreads them more than almost any class of cases that come under his observation.

In a case that I saw him manage he dilated the womb and then used cold injections of a solution of carbolic acid and proposed to wait before doing anything more active until his patient was in a better physical condition. There is no principle in surgery now more generally recognized than that which associates as cause and effect the septic processes that follow operations and an extremely anæmic condition of the subject operated on.

Saturday, Nov. 9th, 1878. Prof. Péan brought into the amphitheatre to-day a number of cases of bursal tumors situated at or near the wrist joint. He said: "A great variety of plans had been adopted in the treatment of these cases; but the first step to

be taken was to determine with *accurracy* whether the bursa communicates by a fistulous opening with the joint *itself*, or whether it simply involves the tendon of the muscle.

"If you find that by firm pressure you are able to press the contents of the bursa out into the joint, then great care must be observed in its management. This last condition of things, however, is the great exception.

"The failure to make this simple distinction in these tumors has led to an endless amount of useless discussion as to the best manner of treating them."

He opens them by a large valvular incision, keeping the knife in the wound until all the fluid is pressed out. He then uses pressure on the seat of the tumor by means of a rubber band encircling the wrist, a short wide piece of wooden splint being put under the band, to keep it from exercising too much pressure upon the circulation of the hand.

Prof. Lister opens these bursæ under the spray and dresses them antiseptically without the least fear of any evil results.

In obstinate cases of "housemaid's knee," I saw Prof. L. open the bursa in the same manner, keeping the patient in bed for a few days, and they recovered without any inflammatory or constitutional disturbance following the operation.

Saturday, Nov. 16th, 1878. The first case shown us to-day was that of a girl 18 years of age and apparently in good health. Prof. Péan said: "The first case I show you to-day is one of great interest in a diagnostic point of view. The tumor that I show you occupying the axillary region in this young girl, is about the size of a goose-egg and was first observed about nine months ago.

"It grew very slowly until the last three months, when it began to increase in size rapidly, and has lately, by its pressure upon the axillary plexus of nerves, caused the patient a great amount of suffering. The first question that we ask ourselves is, What is this growth? What are we most likely to have in this region?

"Adenitis involving the lymphatics, will be the very natural answer. This adenitis may be acute or chronic, it may be suppurative in character, or it may be accompanied by a simple hyper-

trophy of the gland-structure with no tendency to a breaking down of its substance.

"But the case we have before us differs essentially in its physical aspect from either of these usual forms of glandular disease found in this region. First, we have no fluctuation, and have not therefore to deal with a cyst. Second, when I take hold of this tumor and attempt to move it, I find it firmly attached to the pectoral muscle that underlies it. I find, in fact that the growth has invaded the tissues in every direction. The skin is not yet involved, on account, perhaps, of the great thickness of adipose tissue that lies beneath it. I have not therefore the slightest hesitation in pronouncing this growth one of a malignant type."

He then cut down upon the tumor by a long incision, extending from the middle of the axilliary space down the outer aspect of the mammary gland a distance of about 18 Cm. He then began below, and dissected up the mass from the pectoral muscle, and when he had nearly reached the upper border of the tumor, he remarked that as he found it attached pretty firmly to the sheathes of the large plexus of vessels in this region, he must proceed with great caution. Cutting at the same time nearer the growth with his knife, he cut into it, and a large quantity of healthy pus flowed out and the whole thing collapsed. It was simply an indolent form of suppuration of one of the lymphatic glands. Its sac had taken on an inflammatory change and had involved the surrounding tissues in the same process.

Prof. P. at once recognized and acknowledged his error in diagnosis, but proceeded to carefully dissect out the sac, and consoled himself by remarking that his operative procedure was probably the best manner of treating this cyst, for if he had simply opened it and injected its cavity with tincture of iodine he might have had great difficulty in curing it, whereas by this single operation recovery was sure to follow.

Among other cases of interest operated on at this date was a young man, aged 19 years, who, eighteen months before, was taken with an indolent form of orchitis, which gradually went on to suppuration, and in spite of all treatment the process had continued up to this time. Lately the patient's health had begun to fail, and Prof. Péan believed that the testicle was affected by

a tuberculous form of disease, and that the patient was in imminent danger of having his whole system contaminated by this tubercular poison.

He proposed castration as the only remedy. He dwelt at length on the necessity of treating this class of cases promptly and intelligently, and said that, in the early part of his professional life he had allowed many cases of this kind to run into a general tuberculosis of the lungs by delaying the operation that he now proposed to perform on this patient.

OCCLUSION OF THE VAGINA.

Saturday, Nov. 23, 1878.—Our first case to-day was that of a woman 32 years of age, suffering from occlusion of the vagina. Three years ago she had had her first child. Following this she had some form of uterine disease, for which she was treated by a physician in one of the provincial towns. About eight months ago she had a very strong application made to the mouth of the womb, followed by a good deal of pain and vaginal discharge.

Since that time she had not menstruated, and had lately sufferred a good deal from pain in the lower part of her abdomen. Examination by palpation showed her womb considerably enlarged, extending eight or ten centimeters above the symphysis pubis. The finger could only be introduced into the vagina for a distance of two and one-half centimeters, at which point it came in contact with a firm resistance which could not be overcome.

He said that occlusion of the vagina was not a very infrequent accident following the use of very strong caustic applications to the mouth of the womb. He had no doubt but that the acid nitrate of mercury had been used in this case, but even the free cauterization of the mouth of the womb by the nitrate of silver might be followed by this untoward result if care were not taken to free the upper part of the vagina from all excess of the substance used. If this occlusion were only a kind of band or bridle, thin in texture, we might break it up with the finger.

After attempting this mode of procedure and failing in it, he introduced a large sound into the bladder and the forefinger of the left hand into the rectum, as guides to the direction in which he was to make his incision, and using a long bistoury he gradually

cut his way through the occluded part of the vaginal walls. A considerable amount of a black, tarry-looking fluid flowed out when he had passed through the occlusion. The menstrual fluid which had been dammed up by the obstacle that prevented its escape had burrowed down somewhat in the direction of the vaginal outlet, and so had considerably facilitated the operation of reaching the mouth of the womb.

He proposes to keep the parts open by the introduction twice a day of a quadrivalvular speculum, gradually extending the blades of the same until the vaginal cavity is of the requisite size. He considers this manner of dilating and keeping the parts open as better than the use of any of the special dilators made for that purpose.

I treated myself, a few years ago, a poor woman who very nearly suffered from this same accident, by the attempted application of a chloride of zinc paste to the mouth of the womb, for the removal of what was *supposed* to be a cancerous tumor.

The person who used this "cancer plaster" did not get his application to the mouth of the womb but applied it to one side of the cervix, the effect of which was to destroy a considerable portion of the left wall of the vagina at its junction with the neck of the womb itself. When the wound healed the contraction of the cicatrix that remained drew the upper walls of the vagina together, narrowing this portion of its cavity to about one-third of its natural capacity.

The cervix uteri was also drawn considerably towards the left side, the body of the same falling towards the right, thus producing a latero-version of that organ. The result of this alteration in the texture and relation of the parts was to render coitus very painful, produce a bearing down sensation when the patient was on her feet, and in fact to render her a perfect invalid. For the relief of these symptoms I attempted to divide these cicatricial bands first by a number of superficial incisions with the knife. Fear of hæmorrhage deterred me from making my incisions very deep so I made but little progress in the treatment of my case until it occurred to me to try the elastic ligature. I threaded a large curved needle with one of these ligatures, passed it deeply into the parts and tied it firmly. At the end of

twenty-four hours it had cut its way through the hard mass and I had the satisfaction of having an incision deeper than I would have dared to have made with the knife. By repeating this process at other points in this band I was able to partially overcome the deformity and considerably benefit my patient.

In the last students' number of *Le Progrès Médical* there are several pages devoted to the system of medical education in vogue in the different countries of Europe as well as a review of the medical school system in the United States.

The writer says that *unfortunately* the State does not control medical education in America. That our students begin often with no primary education, have generally greatly inferior advantages for the pursuit of their studies, and secure degrees after studying one-half of the time that is required in France to get a permission to practice as a veterinary surgeon.

Unfortunately and unjustly our whole profession are suffering in the eyes of foreign physicians for the short-comings of our medical educational system.

In Germany I found intelligent professors who had an impression that all the medical schools of Philadelphia sell their diplomas after the fashion of the eclectic concern that has been not only a disgrace to our profession but to the good name of every American.

W. S. CALDWELL.

PARIS, Nov. 30th, 1878.

LIEBIG'S EXTRACT OF MEAT.—When Baron Liebig stated that his discovery of Extract of Meat would prove one of the most beneficial to mankind of his various discoveries, he had no conception of the enormous extent of consumption which the future would develop. From a few hundred Bavarian oxen, which were originally sufficient to supply the continued demand, the total of cattle since used by the Liebig Company, exceed 1,500,000 head.

Domestic Correspondence.

ARTICLE XII.

CHICAGO, Dec. 12th, 1878.

Editor Chicago Medical Journal and Examiner:

So many of your readers have had a loving friendship for Dr. Lucius Clark, whose obituary appeared in your last number, that perhaps a few additional words of appreciation will find an acceptable place in your columns.

The writer has known him well for many years, and desires to express his thorough respect for Dr. Clark's character, both as a physician and a man. He was full of an enthusiastic love for his profession, which induced him to seize every moment he could spare from a laborious practice to study upon the subjects pertaining to his cases. His shelves were full of the best medical works, and the best journals of our country were always upon his table. He said to the writer, some twenty years ago, "Unless I am unusually fatigued, I make a point, before I retire, of looking over whatever journals come during the day, for I always get some good out of them." Not only did he read much, but he pondered upon it until it became thoroughly his own. Prof. Armor, of Long Island Medical College, wrote of him: "I have always regarded Dr. Clark as one of the most sagacious and able practitioners that I ever met at the bedside." Prof. Armor but expressed the general feeling in regard to him as was shown by the frequency with which he was sought in consultation by the physicians of Rockford and the neighboring towns.

He possessed a remarkable influence over young men. The writer remembers the keen interest and delight with which, when

a boy at college, he and his classmates listened to the conversation of Dr. Clark, which not only interested and instructed, but always stimulated to higher attainment. Few possessed this power in a higher degree or used it better than he. He loved jokes, but sarcasm, ridicule and coarseness were beneath him. Wherever he went, he carried an atmosphere of good cheer and refinement.

So thorough was his love for his profession, that it affected young men like a contagion, making them think no work so noble or so grand as the physician's, and in consequence he was continually sought by those wishing to study medicine. It was his invariable custom to urge upon these the need of a liberal education first, saying, "the people continually require better educated men for their physicians, and if you would succeed, you should take a collegiate course or its equivalent before commencing professional studies."

Students from his office have nearly every year matriculated in the medical schools of Chicago or New York. His two sons have chosen their father's profession, and are working earnestly in it.

Dr. Clark was a religious man, taking great pains to be regular in his attendance at church, and his pastor always felt that in him he had a true helper, but his piety was of a kind that showed itself in deeds rather than words.

His memory will be warmly cherished in many hearts.

H. P. MERRIMAN.

IN order to facilitate the introduction of the metric system, as well as to furnish a convenient posological table, The Chicago Metric Club have published a Visiting List Dose Book, in which the doses are given both in the metric and in the apothecaries' weights and measures. It is light, and neatly bound in flexible silk covers, so that it may be carried in the visiting list or pocket without inconvenience. All physicians interested are urged to aid in placing this little book in the hands of the profession, not only by sending for it themselves but by ordering it for their friends. Sent free on receipt of six cents in postage. Address, THE METRIC CLUB, 181 Clark Street, Chicago.

Editorial.

ARTICLE XIII.

THE MARINE HOSPITAL SERVICE.

Those of our readers who have observed the changes that have been lately wrought in the U. S. Marine Hospital service, must have been greatly encouraged by the reflections they suggest. Time was when its affairs were in a state of utter confusion and chaos. They were administered in the interest of politicians, by officers who were themselves the creatures of scheming congressmen, and in most instances, instead of being selected on account of their fitness to perform the duties to which they were appointed, the reason for their appointment was that they or their friends had been, or might become, useful in some political campaign.

As a consequence of the want of system and organization and the incompetence of official incumbents, the service was a great expense to the United States Treasury. Hundreds of thousands of dollars were annually expended without the poor sailors receiving a moiety of the benefit that is now realized from the same expenditure. Great praise is due to ex-Senator Logan, in this connection, for the effective work he performed in congress. It was through his influence mainly that the office of Surgeon-General of the Marine Hospital Service was created, and the present efficient occupant of that office selected. No one can doubt the wisdom of the course pursued by Senator Logan, either in reference to the office he aided in creating or in the selection of Dr. John M. Woodworth to worthily fill it.

The marine hospital service, under Dr. Woodworth, has been literally reorganized. Its affairs are now administered honestly, wisely and economically. It is no longer an expense to the gov-

ernment, as it once was, but its income now covers the cost incurred by the excellent and efficient attention given to sick and disabled sailors.

It is only necessary to look at some of the measures the chief has inaugurated to see how all these good results have been accomplished. He has wrested the management of the service from politicians, and taken from them, all the power they formerly possessed in making appointments to its offices; and this was no easy task as we happen to know from a somewhat intimate acquaintance with the matter. Dr. Woodworth passed through many an ordeal in his efforts in this direction, and more than once his friends had reason to fear that he would loose his official head. This, however, was a necessary step preliminary to success in obtaining a sound organization. The next thing to do was to secure intelligent and trustworthy subordinates. In place of a hap-hazard method, each applicant for a place in the service is now subjected to a rigid examination by a board of surgeons convened annually at Washington city. The examination extends over five days and consists in a thorough test of the professional qualification of all who aspire to become officers. This extends to their preliminary education and moral character, and also to clinical examinations at the bedside of the patient. Those passing the highest grade are appointed assistant surgeons.

All vacancies in the rank of surgeons are filled by promotion from the grade of assistant surgeons, on the grounds of merit and fitness alone.

These are some of the most important measures adopted by the Surgeon General to perfect the Marine Hospital Service; others of minor consideration we do not consider it necessary to mention. In addition to the faithful and efficient discharge of these onerous duties connected with his office, and which are to a great extent self-imposed, Dr. Woodworth has found time to do a great deal for the profession at large. The corps of the Marine Hospital Service was the first to adopt the nomenclature promulgated by the Royal College of Physicians, London, which is now regarded by the profession generally as the best in use.

The officers of this branch of public service are now educating the profession of this country in the use of the metric system for

dispensing medicines, so well adapted in every way to this purpose.

To the Supervising Surgeon-General also is due the credit of urging upon Congress the quarantine act. He is now issuing and distributing bulletins of epidemic disease throughout the world, and while much of the space in them is occupied by subjects connected with the advance, prevalence and decline of yellow fever in this country, still telegraphic intelligence in reference to that disease and to cholera, etc., from the most distant parts of Europe and the East occupies a place in the reports. It requires no spirit of prophecy to foretell the great advantage which must result from this comprehensive system of gathering information of the rise, progress and approach of future epidemics. Our quarantine authorities will not only know of the approach of an epidemic disease, but will be informed, by name and description, of the departure from an infected district or port of every vessel that may be destined for this country.

If we mistake not, the idea, inception and execution of the plan of forming a yellow-fever commission to collect all the facts in reference to the prevalence of that awful scourge of the South, originated also with the Marine hospital management. The good that will flow from the creation of this commission, and their report to the Public Health Association, recently held in Richmond, is not all. These and other circumstances that are now of importance to the profession, strongly suggest the benefits that would arise from a national bureau of public health. In fact, the foundations are laid for it in such a way that sooner or later its establishment will be secured. We deem it but just to lay before our readers this rapid and imperfect sketch of the work accomplished by our fellow townsman, Dr. John M. Woodworth. He has made an indelible impression upon the sanitary record of this country; while the history of the United States Marine Hospital Service will point to his exertions in its behalf in all time to come. His is a deservedly prominent position, and one of which the nation should be proud.

ARTICLE XIV.

THE CHICAGO GYNÆCOLOGICAL SOCIETY.

On the evening of the 18th of October, 1878, a few gynæcologists of this city, by invitation, met at the house of Dr. W. H. Byford, to form a new medical society. Drs. DeLaskie Miller, A. Reeves Jackson, E. O. F. Roler, James H. Etheridge, T. Davis Fitch and H. W. Jones were present. Dr. Miller was called to the chair, and after an informal and somewhat lengthy discussion of the objects of the meeting, a resolution was passed to organize a society for the cultivation of knowledge in connection with obstetrics and diseases of women and children. In selecting a name suitable to represent the objects of the Society, the choice between an "Obstetrical" Society and a "Gynæcological" Society was freely canvassed. It was conceded that neither of these names was sufficiently comprehensive to embrace all the objects of the organization, but it was finally decided that the latter was capable of a wider application than the former; hence it was adopted, and the name, Chicago Gynæcological Society agreed upon.

The organization of the Society was completed by electing Dr. H. W. Jones secretary for one year. The secretary performs all the usual duties of that office, and, so far as necessary, exercises the functions of treasurer. There are no other permanent offices. The chairman is nominated and elected at each meeting. As yet there is no written constitution nor rules for the government of the Society, these being regarded as at present unnecessary. The meetings are held at the homes of the members by invitation, the last Friday of each month, at 8 p. m. precisely. The exercises of the evening consist of reading and discussing an appropriate paper once every three months, and at other meetings conversations upon such subject as may be agreed upon the evening previous. One member is selected at the time the topic for conversation is chosen, to lead upon the subject selected. After the discussion is closed, the members partake of a simple collation prepared by the host of the evening.

The first regular meeting was appointed to take place at the residence of Dr. H. W. Jones, on the evening of Friday the 25th of October. The following named gentlemen were invited to meet the Society at that time and place as original members, viz.: Drs. E. Warren Sawyer, Danl. T. Nelson, Henry P. Merriman, Chas. W. Earle, Henry T. Byford and E. C. Dudley.

At the second meeting it was resolved that candidates for membership should furnish the secretary a paper on some topic embraced in the declared object of the organization, and the recommendations of two members of the Society. At the meeting succeeding the nomination, the application must be accepted by a unanimous vote of all the members present.

We heartily wish success and prosperity to this new enterprise.

The fruits of the regular meetings of the Chicago Gynæcological Society are already seen in the reports published in the JOURNAL AND EXAMINER.

EASTERN CORRESPONDENCE.

We take pleasure in announcing that we have completed arrangements by which we expect to be enabled to present to our readers, at regular intervals throughout the current year, correspondence from able writers in Boston, New York, and Philadelphia, which will embody such practical information and news of current events, as will add to the value of these pages.

TELEPHONIC COMMUNICATION.

By the aid of the Edison-Gray telephone, and the ample facilities offered by the American District Telegraph Co., the members of the editorial corps of this journal will soon be within vocal distance of each other and their publishers, and will also be enabled to communicate, by the same instrumentality, with several of the hospitals and dispensaries of the city, and with an increasingly large number of professional men.

Reviews and Book Notices.

ARTICLE XV.—FIBROUS TUMORS OF THE UTERUS. A Clinical Lecture by W. H. Byford, M.D. (Seguin's Series.)

One interested in the progress of gynæcology must open eagerly pages which unfold the recent views of an expert respecting a field so fertile in doubts and discouragements heretofore, but now happily exhibiting some of its most brilliant successes.

Nor can there be any disappointment in store for the reader of the pamphlet bearing the above title, when he contrasts the usually limited scope of a clinical lecture with the fulness of diagnosis, adequacy of description, and the details of treatment here made manifest.

Dr. Byford, after examining his text cases, states that the relative frequency of these tumors, compared with those of ovarian origin has been, in his own experience, as ten to one; that they are homologous growths, but vary in regard to the ratio of their different constituent elements; in some ("myoma") the fibrous, in others ("fibroma") the connective tissues predominating, and that they originate in great and long-continued hyperæmia of the uterus.

Classifying fibroids, as usual, into submucous, intramural, and subserous, he clearly distinguished the characteristics imparted to them by reason of position and surroundings, and as well defines their retroactive influence upon the uterus itself. He accounts for their low degree of vitality and slow growth by the small size of their nutrient vessels, penetrating a condensed but not independent capsule, and shows how this fact contributes to a limitation of their development, and to their degeneration into lower forms of tissue, or to inflammatory disintegration. It is

interesting here to read that "a single tumor grows more rapidly, causes more vascularity in, and greater hypertrophy of the muscular fibres of the uterus than the multinuclear form. The latter often reaches a limit for want of vascular supply, or is transformed into dense tissue of a vitality far below that of a single tumor. It sometimes becomes a true fibroid degeneration of the whole uterus. in which one would hardly trace any of its own anatomical elements."

"Fibroids seldom take their origin in the cervical tissues."

Symptoms will vary with the variety of tumor, hæmorrhage and menorrhagia being most common to the submucous form. Leucorrhœa follows the same rule as do watery discharges, and this because here the vascularity of the womb is greatest.

"Dysmenorrhœa, if present, is of the obstructive kind, and is most aggravated where the tumor is multinuclear and submucous."

Not to quote too largely, it is pleasant to find the author announcing a generally favorable prognosis, "because these tumors occur mostly in persons who approach the menopausis, and often cease growth afterward; they grow slowly and for years without causing dangerous symptoms, and often cease enlarging from no discoverable cause; they sometimes degenerate into inert masses, not particularly inconvenient, and nature will often dispose of them by spontaneous expulsion; a judicious medical treatment is often efficient, or surgery interposes successfully for their removal."

In regard to the correlation of pregnancy and fibroid tumors, the author decides the former to be "most infrequent when the latter are submucous and confined to the central or upper zones of the uterus, and that the subserous forms are not so antagonistic."

In general, the larger the tumor the less likelihood of pregnancy, but if it occur, an impossibility of normal uterine development will lead to abortion. The danger of hæmorrhage under these circumstances Dr. Byford thinks to be over-rated.

The effect of pregnancy upon some of these tumors will be *nil*, but in very many cases, the subsequent process of involution set up in the uterus seems to extend to the morbid tissue and its decadence is thus assured.

Among remedies preventive of hæmorrhage, the author is particular to describe his method of preparing vaginal tampons, to be always on hand, and ready for introduction by the patient or her attendants. They consist of sponges, fine and large enough to fill the vagina, which have been saturated with a half strength dilution of the *liquor ferri persulphatis*, wound with a string to a proper shape and degree of compression, and laid away to dry. To introduce one of these when unwound, or to withdraw it by a cord passed through prior to suturation, will be no difficult matter. It may remain, if successful, forty-eight hours, when the hæmorrhage will be unlikely to return.

Considering the question of permanent cure, Dr. Byford alludes kindly to the "sorbefacient" remedies upheld by Atlee and others, but states that his own success with them has not fulfilled expectation. But he adheres positively to former views of the efficacy of ergot, which he affirms will cure one-third of the cases, and favorably influence two-thirds. In a recent address to the Obstetrical Society of Edinburgh, Dr. Alexander Simpson substantiates this opinion. Dr. Byford prefers to administer Squibb's fluid extract in doses of 1.33 C. C., gradually increasing till 12 or 16 Gms. are given daily. The larger doses are not used unless to promote expulsion of the tumor, and they frequently produce very distressing pain, which continues notwithstanding the withdrawal of the medicine.

Even opiates will at times fail to subdue the throes of the uterus till expulsion is complete, but the author affirms this violence of action to have done no real mischief in the cases under his own hands.

The question of the danger of using ergot in the subserous variety of tumors, Dr. Byford disposes of by calling attention to the fact that, in this case, the contractions induced are away from the axis of the tumor, and tend to pediculate it, or diminish its nutrient supply.

Gangrene of the extremities, or serious inconvenience to the nerve centers, have never fallen within the province of the author to see; nor does he seem to be alarmed by the degree of septicæmia caused during a slow disintegration and expulsion of the growth.

The use of electrolysis by Drs. Kimball and Cutter receives passing notice, but with a very qualified approval.

The mention of surgical treatment is confined to that appropriate to sub-mucous fibroids, and the author's first remark is that this treatment must be as simple as possible, compatible with thoroughness. Its dangers arise (1) from laceration or other damage to the uterus resulting in hæmorrhage or inflammation; (2) incomplete ablation, causing septicæmia; (3) shock, sometimes following protracted efforts at removal.

Dr. Byford enumerates ligation, torsion and amputation, and describes minutely the manner in which each is to be effected, giving a decided preference to torsion wherever applicable.

One misses here the credit that should be given Dr. Emmet for his plan of "removal by traction," relying upon the closely following uterine wall to pedunculate the mass as withdrawn and separated.

It is evident from his whole treatment of the subject, that Dr. Byford is no alarmist, and the student would do well to consider the experiences of other eminent authorities if he would rightly weigh the dangers arising from hæmorrhage, shock and septicæmia during the spontaneous, medicinal or surgical treatment of uterine fibroids. H. W. J.

ARTICLE XVI.—A CLINICAL HISTORY OF THE MEDICAL AND SURGICAL DISEASES OF WOMEN. By Robert Barnes, M.D., London, Censor of the Royal College of Physicians; Lumleian Lecturer (1873); late Examiner in Obstetrics and the Diseases of Women at the University of London and the Royal College of Physicians and Surgeons; Obstetric Physician and Lecturer on Obstetrics and the Diseases of Women to St. George's Hospital. With one hundred and eighty-one illustrations. Second American, from the second and revised London edition. 8vo., pp. 784. Philadelphia: Henry C. Lea.

The first edition of this excellent work having been for some time exhausted, the author has leisurely revised it, condensing many parts and adding one new chapter, on the "Relations of Bladder and Bowel Disorders to the Diseases of Women." He has also increased the number of the illustrations by cuts which

are not only new but, like a large proportion of the others, are original with Dr. Barnes.

This being the second edition of the work, an extended review is unnecessary, but there are a few points to which we would call attention.

We are pleased to note the pains the author takes in various parts of his work to caution his readers against becoming *mere* specialists. In the beginning of the second chapter he says: "There is nothing special in the mode of studying diseases of women." "The general or distant affections require to be investigated and treated; but it is not safe to overlook the organs that may be secondarily involved." "And there are disorders of this special system commencing in it, and in their turn acting upon and inducing disorders in distant organs or in the general system." In the fifth chapter he says: "Do not concentrate all attention upon this one region of the body. Remember that the fault may be in distant parts: that disease in other organs may complicate disease in the pelvic organs." "The great clinical rule should be: Interrogate all the functions; examine every organ. In this way only can we acquire a well founded confidence that important disease is not overlooked; in this way only can we rightly estimate the relations of symptoms to disease, and the reactions of disease upon distant organs, and frame a rational plan of treatment." In another place—"We thus see how dangerous it is to practice in the spirit of pure specialism; how absurd it is to map out the body and assign particular territories to particular classes of practitioners. It will be seen how intimately—how indissolubly—that part of medicine which takes for its basis the particular study of the generative system in women is linked with the disorders of the alimentary, vascular and nervous systems; that is, a pure specialty cannot exist. A more monstrous thing cannot be conceived."

Expressions like these indicate the broad judgment and liberal culture of the author, and make us feel inclined to accept his teachings as safe and judicious.

The work is well condensed, and we do not know a more reliable one upon the subject.

A few things about the book strike us unpleasantly. On page

375 the author says: "Radford, imbued with the teachings of this master (Dr. Blundell), encouraged Clay at the commencement of that career which may be said to have placed ovariotomy upon a secure foundation." "The operation was suggested by William Hunter; its practicability and the mode of performing it were taught by John Bell; it was first practiced, and that successfully, by an American, McDowell, a pupil of John Bell." How grudgingly he gives a little credit to Ephraim McDowell, yet implies that most of the honor belongs to his own countrymen!

The book appears in handsome dress—good paper, clear type, wide margins and excellent engravings. H. P. M.

ARTICLE XVII.—THE THROAT AND ITS DISEASES. Lennox Browne, F.R.C.S., Ed., Senior Surgeon to the Central London Throat and Ear Hospital; Surgeon and Aural Surgeon to the Royal Society of Musicians, etc. Henry C. Lea, Philadelphia, 1878. Jansen, McClurg & Co., Chicago.

This book is designed as a practical guide to the diagnosis and treatment of diseases of the fauces, larynx and nasal cavity.

The author's endeavor has been to give prominence to those facts which will aid the practitioner in making an accurate diagnosis, and selecting appropriate treatment; but he has omitted discussions of purely pathological interest, having, instead, simply referred the reader, for them, to other works.

In describing instruments and methods of treatment he mentions only those which he has found most efficient, in his experience of eleven years of practice, devoted mainly to diseases of the throat.

He has given especial attention to the illustrations—about one hundred and fifty in number—one hundred of which are colored, so as to represent, nearly as possible, the condition in the patients from whom they were taken. These add greatly to the value of the book for those who have only a limited opportunity to study diseases of the larynx.

The first eighty-six pages are devoted to the description of laryngoscopic and rhinoscopic instruments, and the modes of using them; together with a description of the anatomy of the

larynx and the semiology and general therapeutics of throat diseases.

Four chapters are devoted to diseases of the fauces, pharynx and nasal cavity, and the remainder of the book, six chapters, to diseases of the larynx.

The treatment suggested is not materially different from that recommended in other works of the kind, excepting in regard to morbid growths.

A single chapter treats of benign neoplasms in a light which will surprise many who have read of the brilliant results obtained by Lewin, Czermak, Morrell, Mackenzie, and others, by operative measures.

The author urges against instrumental procedures—that the functional disturbances produced by these growths is not usually grave; that many of the growths will disappear under local applications; that recurrence of the growths after removal is not infrequent; that the instruments now employed are more dangerous than formerly, and that injury of the healthy parts may lead to fatal results, while the irritation incident to efforts at removal may cause a benign growth to take on a malignant character.

Though we are not prepared to give up operative procedures within the larynx, we have no doubt that many of the author's objections are valid, and they should deter those from operating who have not special experience in the treatment of diseases of the larynx.

This is a valuable work, and we take special pleasure in recommending it to the profession for its excellent illustrations, but especially on account of the letter press, which has been admirably executed in large clear type.

We commend this book as a model for all who wish to publish medical works, which are far too often rendered almost valueless by being printed with small or indistinct type, which renders their perusal painful, and by a prolixity which exhausts the reader's patience.

E. F. I.

ARTICLE XVIII.—A MANUAL OF PRESCRIPTION WRITING. By Matthew D. Mann, A.M., M.D., Lecturer on Clinical Microscopy, and Examiner on Materia Medica, in the College of Physicians and Surgeons, New York; etc., etc. New York: G. P. Putnam's Sons, 1878. Chicago: Jansen, McClurg & Co. 12mo. pp. 155. Price 90c.

The appearance of another work on prescription writing, so soon after the book of Gerrish, is a sure indication that the necessity of greater care and better knowledge in the matter of prescribing is being duly appreciated by the profession. The book before us is more extended than Gerrish's, without being unnecessarily elaborate in details.

Besides the usual directions for writing simple and compound prescriptions, information about weights and measures, rules for the grammatical construction of Latin prescriptions, forms and examples of extemporaneous prescriptions, it contains a complete list of officinal preparations, and a very valuable table of the doses of all substances in the primary list of the U. S. Pharmacopœia. The doses are given in both the old and metric systems. The introduction of a chapter on the metric system is certainly demanded by the times. The method of writing this system adopted in this book, is that advocated by the JOURNAL AND EXAMINER, and found in every foreign medical literature except the English.

F. C. H.

ARTICLE XIX.—REST AND PAIN: A Course of Lectures on the Influence of Mechanical and Physiological Rest in the Treatment of Accidents and Surgical Diseases, and the Diagnostic Value of Pain. Delivered at the Royal College of Surgeons of England, in the years 1860, 1861 and 1862. By John Hilton, F.R.S., F.R.C.S., etc. Edited by W. H. A. Jacobson, F.R.C.S., Assistant Surgeon to Guy's Hospital. Second edition. New York: William Wood & Co. 8vo., pp. 299.

The well-known publishing firm of William Wood & Co., of New York, have entered upon a new scheme to supply the medical profession with standard works at marvelously low prices. They have opened subscriptions for "Wood's Library of

Standard Medical Authors," which shall contain only works of recognized worth. Each subscriber will receive one volume each month throughout the year. Subscriptions are taken: 1st, The $12.00, payable on delivery of the first volume, in which case the volumes are all delivered free, by mail, from New York. 2d, Payable $6.00 semi-annually, in January and July, in which case the subscriber pays express charges on the January and on the July volumes, the other volumes being sent free, by mail; and 3d, Payable monthly at $1.25 per volume; in this case the volumes are each delivered free, by express or carrier, C. O. D.

The scheme commends itself to all physicians who are desirous of obtaining a library of valuable medical books for a small outlay of money. And the selection of such books as Hilton's work on "Rest and Pain," which is to be the January volume of "Wood's Library," shows that the publishers are in earnest when they promise to furnish standard works to their patrons.

We hope many physicians will avail themselves of this rare opportunity to fill their shelves with useful books.

ARTICLE XX.—HARVEY AND HIS DISCOVERY. By J. M. DaCosta, M.D., Professor of the Practice of Medicine at the Jefferson Medical College. Philadelphia: J. B. Lippincott & Co. Chicago: Jansen, McClurg & Co. Octavo pp. 57; price 75c.

This little volume consists of an address delivered at the opening of the session at the Jefferson Medical College. It is a very fitting tribute to the memory of this famous man, in the tercentennial year of his birth, and is interesting reading for every physician and friend of history of medicine.

BOOKS AND PAMPHLETS RECEIVED.

A Manual of Physical Diagnosis. By Francis Delafield, M.D., and Ch. F. Stillman, M.D. Cloth, pp. 30. New York: Wm. Wood & Co. Chicago: Jansen, McClurg & Co.

Essentials of Chemistry, Inorganic and Organic, for the Use of Students in Medicine. By B. A. Whithouse, A. M., M.D. Cloth, pp. 257. New York: Wm. Wood & Co. Chicago: Jansen, McClurg & Co.

Clinical Diagnosis; a Handbook for Students and Practitioners of Medicine. Edited by James Finlayson, M.D., with 85 illustrations. Cloth, pp. 546. Philadelphia: H. C. Lea. Chicago: Jansen, McClurg & Co.

The Principles and Practice of Surgery. By J. Ashhurst jr., M.D. Second edition, enlarged and revised, with 542 illustrations. Leather, pp. 1040. Philadelphia: H. C. Lea. Chicago: Jansen, McClurg & Co.

Lectures on Bright's Disease of the Kidney; Delivered at the School of Medicine of Paris. By J. M. Charcot. Collected and published by Drs. Bourneville and Sevestre, Editors of *Le Progrès Médical*, and translated with the permission of the author, by Henry B. Millard, M.D. Cloth, pp. 100. New York: Wm. Wood & Co. Chicago: Jansen, McClurg & Co.

Lectures on Localization in Disease of the Brain. Delivered at the Faculté de Médicine de Paris; 1875. By J. M. Charcot. Edited by Dr. Bourneville. Translated by Ed. P. Fowler, M. D. Cloth, pp. 133. New York: Wm. Wood & Co. Chicago: Jansen, McClurg & Co.

Transactions of the Thirty-third Annual Meeting of the Ohio Medical Society, held at Columbus, May 14, 15, 16, 1878. Columbus, O.

Manual of Prescription Writing; With a Full Explanation of the Methods of Correctly Writing Prescriptions. A Table of Doses expressed in both the Apothecaries' and Metric Systems. Rules for Avoiding Incompatibilities and for Combining Medicines. By M. D. Mann, A.M., M.D. Cloth, pp. 155. New York: G. P. Putnam & Sons. Chicago: Jansen, McClurg & Co.

Practical Surgery, Including Dressing, Bandaging, Ligations and Amputations. By J. Ewing Mears, M.D., with 227 illustrations. Cloth, pp. 279. Philadelphia: Lindsay & Blackiston. Chicago: Jansen, McClurg & Co.

A Handbook of Nursing for Family and General Use. Published under the direction of the Connecticut Training School for Nurses, State Hospital, New Haven, Conn. Cloth, pp. 266. Philadelphia: J. B. Lippincott & Co. Chicago: Jansen, McClurg & Co.

The Pathological Anatomy of the Ear. By Herman Schwartze, M.D., with the Author's Revisions and Additions, and with the Original Illustrations. Translated by J. Orne Greene, A.M., M.D. Cloth, pp. 174. Boston: Haughton, Osgood & Co. Chicago: Jansen, McClurg & Co.

Harvey and His Discovery. By J. M. DaCosta, M. D. Cloth, pp. 57. Philadelphia: J. B. Lippincott & Co. Chicago: Jansen, McClurg & Co.

Transactions of the Pathological Society of Philadelphia. Vol VII. Edited by J. H. C. Simes, M.D. Cloth, pp. 175. Philadelphia: J. B. Lippincott & Co. Chicago: Jansen, McClurg & Co.

A History of the Diagnosis, Pathology and Treatment of Yellow Fever By J. B. Marion, M.D. Reprint from *American Practitioner*, Nov., 1878.

Holden's Human Osteology; Comprising a Description of the Bones, with Delineations of the Attachments of the Muscles, the General and Microscopical Structure of Bone, and its Development. By Luther Holden, F. R. C. S. Fifth edition, revised by the author with the assistance of Alban Doran, F. R. C. S. Cloth, pp. 286. Philadelphia: Lindsay & Blakiston. Chicago: Jansen, McClurg & Co.

The Principles and Practice of Surgery; Being a Treatise on Surgical Diseases and Injuries. By D. Hayes Agnew, M.D., LL. D. In two volumes. Vol. I. Cloth, pp. 1062. Philadelphia: J. B. Lippincott & Co. Chicago: Jansen, McClurg & Co.

Les Tumeurs Adenoides du Pharynx Nasal, leur Influence sur l'Audition, la Respiration et la Phonation. Leur Traitement. Par le Docteur B. Loewenberg. 1878.

De la Valeur Therapeutic des Courants Continues. Par le Docteur L. J. Teissier, Avec planches, intercallés dans la Texte. 1878.

Annual Report of the Secretary of the Treasury of the State of the Finances for the Year 1878.

The Duties of the Profession concerning Prostitution and its Allied Vices. By Fred. H. Gerrish, M.D. Reprint from the Transactions of the (Maine) Association, 1878.

Annual Report of the Surgeon General U. S. Army, 1878.

Diseases of the Nasal Cavity and the Vault of the Pharynx. Translated from the German of Dr. Carl Michel, with an introduction by E. L. Shurley, M.D., and C. C. Yeuans, M.D. 1877.

Air and Moisture on Shipboard; A Fragment of Applied Physiology. By Th. J. Turner, A.M., M.D., Ph. D. 1878.

The Constituents of Climate, with Special Reference to the Climate of Florida. By F. D. Lente, A.M., M.D. Reprint from Richmond and Louisville *Medical Journal.*

Report of the Quebec Lunatic Asylum for 1877–8.

Automatic Cerebration as Related to Cerebral Localization. By J. K. Beauduy, M.D. 1878.

Transactions of the Colorado Medical Society, 1877–8.

The Structure of the Colored Blood Corpuscles of Amphiuma Tridactylum, the Frog and Man. By Dr. H. D. Schmidt. Read before the R yal Microscopical Society, April 3, 1878.

The Development of the Nervous Tissues of the Human Embryo. By H. D. Schmidt. Reprint from the *Journal of Nervous and Mental Diseases*, July, 1878.

Case of Repeated Attacks of Appoplexy with Aphasia. By Dr. H. D. Schmidt. Reprint from *Journal of Nervous and Mental Diseases*, July, 1878.

Summary.

Collaborators:

DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY, DR. D. R. BROWER.

PRACTICAL MEDICINE.

TREATMENT OF GENERAL PROGRESSIVE PARALYSIS (DEMENTIA PARALYTICA). *Medical & Surgical Reporter.* Translated from the German of Prof. Ludwig Meyer by Dr. Liebmann, Nov. 2, 1878.

Prof. Meyer details a method of treatment that has been followed by remarkable success in this hitherto regarded incurable disease. He regards the disease as a chronic encephalitis, limited to the cortical layer of the convexity of the anterior half of the great hemispheres. He combats this condition by vigorous counter-irritation established as near as possible to the seat of the affection. He lays great stress upon his method of irritation, and as this treatment should be instituted in the very beginning, that is, before the necessity has arrived for the confinement in an insane hospital, we give it in full.

"The hair should be shaved off from the scalp in the region of the great fontanelle, to the extent of half a hand, and then as much tartar emetic ointment (1:4 Germ. pharm.) be rubbed in the central portion of the shaved surface as would cover a silver dollar. Much depends on the first application being accurate and energetic. A portion of the salve, as big as a pea, I caused to be rubbed on twice, by means of a firm and smooth pledget of linen of the size of a finger, and then I covered the reddened

surface with a piece of linen saturated with the ointment. The second application, which has to take place twenty-six hours later, ought to be made with the greatest care and precaution, in order to save the already loosened epidermis. Such denudation would cause considerable pain, and besides, would not benefit the procedure any, for this latter's success depends entirely on the feasibility of bringing the scalp, in its greatest possible depth, to swell and gradually to slough. Two applications, as a rule, suffice, but, to be cautious, it is well to spread, on the third day, a small portion of the ointment on the already elevated surface. During the third and fourth day the swelling increases, extends to the frontal region, and even to the face—rarely to the occiput and neck. As soon as the swelling increases, warm poultices should be applied freely. In a few days the integuments are detached by the abundant suppuration. The whole procedure requires on an average fourteen days, and leaves a regular, round, deep and copiously suppurating sore, which, by means of the basilic ointment, should be kept open for two or three months. During this whole time, and beyond it, if tolerated well, the patients are put upon iodide of potassium, in moderate doses (3–5, 0, aq. dest. 180,0, a tablespoonful four times a day). The diet, especially during the first weeks of this treatment, ought to be easily digestible, but vigorous. The patient should be sent into the open air as soon and as often as possible; should, if his strength allows it, do light work in the garden, but should be guarded against the heat of the summer's sun. Baths in any form are to be avoided, for they are, under these conditions, only too apt to produce congestion of the head."

Prof. M. has applied this treatment to seventeen cases of this disease. Of this number, two only remained under treatment fourteen days, one of these manifesting remarkable improvement; of the remaining fifteen, eight were cured; of these eight, one experienced a relapse from the too early abandonment of the treatment. A detailed history is given of the eight successful cases.

The article closes with a warning against a too energetic anti-syphilitic treatment.

OBSTETRICS.

OBSTETRICAL ANÆSTHESIA. E. Hervieux. (*L' Union Médicale, Aug.* 27, 1878.)

The author is a partisan of obstetrical anæsthesia, and considers it as a veritable conquest of modern medicine. He protests against the opposition it has met with in France, but under conditions: 1st, that the indications and contraindications be clearly stated, and 2d, that the accoucheur always superintend personally the administration of the chloroform. Certain colleagues have presented obstetrical anæsthesia as practiced now-a-days, as completely inoffensive. This is an exaggeration and may cause the most dangerous consequences, of which the least would be to compromise the cause we would serve.

Undoubtedly there is no comparison to establish between surgical and obstetrical anæsthesia. The latter, as Campbell says, is only an analgesia. It does not abolish the intellectual and sensorial faculties; it does not take away the consciousness of self. It requires to obtain it (and this is capital) but very feeble doses of chloroform. It may be kept up for hours without difficulty, and without giving rise to coma or the stertor of surgical anæsthesia. The danger is then reduced to the smallest proportions, but not entirely removed. These are the proofs:

1st. There are subjects in whom the sensibility to the action of chloroform is excessive, and who only need a few inspirations of the anæsthetic agent to lose sense of feeling and consciousness. The author cites his own case in which the inhalation of chloroform for the extraction of a tooth, for about fifteen seconds plunged him into a profound sleep, and absolute insensibility. Cases of this kind are common with children, and not very rare in young women. Suppose an accoucheur has a case of this kind, and, encouraged by former successes, departs from the rules of prudence and gives large doses after the example of Simpson. Is it not evident that he may be surprised by comatose symptoms capable of endangering the life of the patient? The obstetrical effort may indeed, as Campbell says, bring the patient out of the coma, but this effort may be lacking as well as

the uterine contraction which follows it, and the danger then cannot be contested.

2d. In opposition to the exaggerated sensibility of certain women, there are organisms refractory to this action. I have met with some patients with an invincible resistence to the anæsthetic power of chloroform—invincible, at least, as regards the limits which I laid down for myself. It has seemed to me as if women, familiarized for a long time with the use of ether, or those who, under pretext of a need of tonics, have taken daily a considerable quantity of pure wine, are overcome by the anæsthetic agent with great difficulty. The author cites the case of a young woman to whom he gave about 100 grams of chloroform, obtaining but very incomplete anæsthesia. There is in this natural or acquired resistence to the action of chloroform, a danger which should be understood, for if one seeks only analgesia during the labor, he would only succeed by such an accumulation of doses that, at a given moment, he might no longer be master of the situation.

3d. I have encountered certain women who, after having solicited chloroform, had an excessive repugnance for absorption of its vapor. If one does not proceed like Simpson with large doses so as to plunge the patient rapidly into the anæsthetic state, it may happen that the patient will not take the chloroform, having been painfully impressed with the first inhalations, and not having had time to feel its benefits.

4th. Chloroform retards the labor. M. Campbell has recognized this fact, and observations made recently at the Maternité by M. Pinard confirm it. The intervals which separated each contraction were noted with care during one or several hours, then chloroform was given in moderate doses, and under its influence the internal instead of diminishing progressively, as occurs in a natural labor, gradually increased. There was one case, even, in which there was complete cessation of pains, and use of forceps necessitated. Now suppose the bag of water to be prematurely broken, it is not simply a momentary arrest of uterine contractions that we have, but the death of the fœtus by asphyxia is threatened.

Is there not still another danger to be noted? at the same time recognizing with Campbell: 1st. That the lengthening of the in-

tervals and the lessening of their duration and intensity by chloroform are especially observed in cases of exceptionally rapid and painful dilatation. 2d. That the labor, momentarily retarded, often resumes its normal rhythm of contractions and efforts which cause toward the end an accelerated movement, so as to compensate for the primitive retardation. From this we see that the cases of retarded labor observed by Pinard are in no wise contradictory to those of acceleration noted by Dumontpallier, since the retardation determined by chloroform may have taken place during the period of dilatation and the accelerated movement in the expulsory stage.

5th. There are women originally disposed to syncope, in whom the state of gestation, even the most normal, aggravates in a singular manner this disposition. Suppose that this fact be unknown to the accoucheur, is it not evident that chloroform would be dangerous? The disposition to syncope might be complicated with extreme susceptibility to chloroform, and this double idiosyncrasy might act simultaneously to compromise the essential functions from the very first inhalations.

6th. Beside the syncopal tendency must be mentioned, as so many dangers suspended over the head of the patient, all the diseases of the heart and respiratory tract which predispose to asphyxia, hypertrophy of the heart, valvular narrowings, tuberculosis, emphysema, pleuritic effusions, etc. It is true, Championnière does not believe that most of these affections contra-indicate the use of chloroform. But is this a reason why we should regard chloroform as innocuous in these diverse pathological states? We may brave a real peril ten, twenty times, but a day comes when by the neglect of a simple precaution or detail, we succumb. I might mention all the diseases of the nervous centers which give rise to passive hyperæmias, such as cerebral hæmorrhages, softening of the brain, etc. Also certain physiological or morbid states, such as a twin pregnancy, hydropsy of the amnion, and in general all the organopathic conditions which distend beyond measure the abdomen, crowding back the diaphragm and with it the heart and lungs, and causing syncope, asphyxia or visceral congestions.

7th. Finally, there is a danger almost as much to be feared

as most of those just mentioned, that which arises from a deficient obstetrical education. To administer the chloroform with measure, to keep, by means of suitable doses methodically given, the patient in a state of analgesia, which does not take away from her the exercise of her intellectual functions, and her consciousness, is very well. But if, by reason of faulty diagnosis, which is perhaps most commonly the case, the accoucheur overlooks a grave cause of distocia, deformed pelvis, presentation of the trunk, locking of the head by fault of rotation, etc., or any other circumstance requiring an operation, what will happen? The prolongation of the anæsthesia will bring on a situation as perilous for the mother as for the child, perilous because one waits instead of acting; perilous because the resistance of the obstacle annihilates the power of the obstetrical effort; perilous because this effort no longer produced, no longer exercises its disanæsthetic action upon the organism; perilous finally, because every labor which does not terminate, exhausts the forces of the mother and compromises the existence of the fœtus.

The author would not, therefore, entrust the administration of chloroform to internes and nurses in the absence of the physician, nor does he consider it advisable to allow midwives to give anæsthetics except under the advice and direction of the physician. Having reviewed the dangers and inconveniences of obstetrical anæsthesia, the author speaks of the advantages of this restricted anæsthesia.

1st. *Chloroform lessens the pains of uterine contraction.*—All the efforts of adversaries cannot prevail against this fact, slight in appearance, but undeniable, and great in practical consequences. They say it is not true anæsthesia. What matters it if the analgesia obtained is sufficient to make the patient bear patiently the pains so dreaded and so full of anguish? They say, also, that in this restricted anæsthesia the patient still suffers. True, but there are degrees in suffering. If, instead of suffering as ten I only suffer as one, should I not esteem as an immense benefit the agent that can reduce the pain in such a degree? The lessening of the pain by chloroform is not subject to an inflexible law; it may vary with individual susceptibilities, the doses being equal. The fact is beyond dispute.

2d. *Chloroform procures to the woman in labor a perfect calm during the interval of uterine contractions.*—M. Campbell describes the interval between contractions in this semi-anæsthesia as *a grand silence.* M. Lucas Championnère, Pinard and the author, have all observed that the patient remains perfectly calm during the interval.

3d. *Semi-anæsthesia helps the patient to pass easily through the painful period of dilatation.*—The first stage of this period is usually easily borne, the pains being short and slight, and the intervals long and painless. But in the second stage the pains are sharper and more frequent, and the intervals marked by increasing agitation; the woman suffers all the time, weeps, despairs, perceives no progress, and declares she can never stand it. Now, chloroform in small doses calms this agitation, dissipates fear and evil presentments, and allows the nervous system, shaken by the shocks of pain, time to recover its physiological equilibrium. M. Danyau is one of the first to make the possible application of anæsthesia to the period of dilatation. He says: "I think we may have recourse to simply attenuating doses of chloroform in cases of very slow and painful dilatation, even if we renounce it later, at the beginning of the expulsory stage, in general, much less painful, and moreover nearly always so valiantly supported by women."

4th. *Chloroform renders tolerable the great pains of the expulsory stage.*—While many women do support this stage well, yet, in all cases where the expulsory stage is long and painful, and especially in primiparæ, the author regards chloroform as a great boon, and if we did not have chloroform it should be discovered.

5th. *The certitude of being given chloroform frees the primiparæ from the terrors of labor. It gives to multiparæ, who have already experienced the benefits of anæsthesia a salutary confidence.*—True, most primiparæ do not dread parturition. They know they must suffer, but have a vague idea of the pains that await them, feeling, perhaps, that where the mother has passed the daughter may also pass. But there are others who regard it with terror, believing they shall never be able to live through it. Give such persons the assurance that chloroform will spare them

these pains, and their confidence is established and all their gloomy thoughts will vanish like a bad dream.

The multipara also, whether previously anæsthetized or not, on the promise of being given chloroform, will pass through the diverse stages of gestation full of confidence and security. It is well known what a happy influence the absence of inquietude and of all preoccupation has upon pregnancy.

6th. *Chloroform is one of the greatest aids in nervous or hysterical women, with exaggerated sensibility, whom the pains of childbirth throw into extreme agitation.*—The author gives the following case to illustrate the good effects of chloroform in a highly nervous woman: An extremely nervous young woman, pregnant for the third time, and at term, was taken during the period of dilatation with disordered movements which her husband, the nurse and myself could with the greatest difficulty repress. When left to herself, she sat up and lay down, turned and rolled about constantly, tossed about, threw her arms right and left, kicked, and in a word, gave herself up to the most violent gymnastics, ever crying, weeping, gesticulating. To put an end to these fantastic exercises he resorted to chloroform which produced complete quiet. Expulsion soon took place, during a relative calm, the uterine contraction being valiantly aided by the muscular efforts of the patient. He employed 80 grams of chloroform and there was neither sleep, nor period of excitation, nor abolition of consciousness.

7th. *Chloroform will also be very useful in all cases of delay or suspension of labor, whether from nervous exhaustion, local pains, neuralgic or otherwise, rigidity or spasmodic retraction of the neck, or from the effects of partial or irregular contractions of the womb.*—In addition to his own experience, the author refers to that of Dumontpallier, Cazeaux, Montgomery, Meigs, to support the truth of this statement.

It results from the preceding declarations that chloroform in obstetrics has numerous indications, and that the number of its advantages is far greater than the dangers. The more we advance in the discussion of this question, the more we enlarge the circle of its indications, and the better they are pointed out. It would be imprudent, almost unskillful, to use chloroform in all

cases without distinction. The contra-indication might emanate from not only certain abnormal conditions, but also from physiological circumstances, such as rapid and painless labor.

PATHOLOGY.

EXPERIMENTAL RESEARCHES ON SCROFULOUS AND TUBERCULOUS INFLAMMATION OF JOINTS. By M. Schüller. (*Centralblatt f. Chirurg.*, 1878, No. 43.

The starting point of the experiments was the well-known fact, that very slight injuries suffice to produce grave joint diseases in some individuals, while others will bear much more severe injuries without any such consequences. Healthy animals likewise, can sustain severe traumatic lesions of joints without more than mere temporary discomfort.

In order to produce a tuberculous tendency in animals, Schüller inoculated rabbits and dogs with tuberculous sputa, pieces of phthisical lungs or simple bacteria derived from tubercles and cultivated in nutrient solutions, according to the plan of Klebs. The fluids were injected into the lungs or inhaled by the animals from atomizers. In the course of some weeks, such animals become affected with pulmonary and even general miliary tuberculosis.

After the inoculation the animals were bruised so as to injure the knee-joint. Within some weeks the joints were examined, and in nearly all cases an inflammation was observed, consisting in a granular proliferation of the synovial membrane and a considerable swelling of the ends of the bones, which was noticeable during life as a tumefaction of the joint. In rare cases the joint suppurated.

Similar, although milder lesions were produced by direct injection of the infective fluids into the joint.

THERAPEUTICS.

RAPID RELIEF OF THE VIOLENCE OF ASTHMA BY THE HYPODERMIC USE OF MORPHIA.—By Dr. Henri Huchard. (*L'Union Médicale*, July 25 and 27, and October 3, 15, and 24, 1878.)

In several articles in the above mentioned journal, Dr. H. Huchard has strongly advocated the use of hypodermic injection of morphia in cases of asthma. Having found such marked relief in the spasmodic efforts at respiration, he argues that it exerts a special influence on the respiratory system. On this hypothesis, he pursued its application in other affections where the difficulty of respiration becomes a troublesome symptom, namely, in aortic affections, accompanied with cerebral anæmia, phthisis, and uræmia. After the publication of his first papers, Dr. H. received interesting cases from other physicians, in which its effects were equally happy.

Four well marked cases of relief of labored respiration, associated with interstitial nephritis, are carefully detailed.

In the concluding article, Dr. H. answers the following questions:

1. Can the hypodermic injection of morphia be substituted by the opium preparations, or by morphia introduced into the alimentary canal? Assuredly not.

2. Does not the frequent hypodermic injection of morphia produce serious inconvenience? Not when carefully performed. He begins with from 0.003 to 0.005 grams, increasing the dose to 0.01 or 0.015 grams at the most for each paroxysm.

3. Is it in virtue of its hypnotic action that morphia relieves the dyspnœa, or has it a direct action on the respiration? Mr. H. claims, however opinion may differ as to its physiological action, clinical experience establishes the fact that morphine facilitates respiration; *la morphine fait respirer*.

4. Does the morphine medication only relieve the symptom dyspnœa, without any influence on the duration of the disease which is the cause of the symptom? This question is referred to further observation, but the pain being relieved, the general system is necessarily benefited, and the disease thus probably modified.

FOR TOOTHACHE. (*The Doctor.*) Mr. Merson uses the following formula:

℞	Chloroform. pur.....	12
	Tr. aconiti (Fleming).....	12
	Tr. capsici.....	4
	Tr. pyrethri.....	2
	Ol. caryoph.....	2
	Gum. camph.....	2
	Misce.	

He abolishes the pain of extraction by first drying the gum and tooth, and then applying four or five drops of the above on a little cotton. Then, having previously *warmed the forceps*, extract without delay. For toothache, a pellet of wool soaked in the above may be introduced into the cavity, and often gives instant relief.

SALICYLIC ACID AS AN ANTAPHRODISIAC. (*The Doctor*, Oct. 1, '78.)

Dr. Jewett and others have observed that salicylic acid appears to possess great power as an antaphrodisiac. Some patients who have taken it, are reported to have lost sexual power for months. If these statements prove correct, the drug may be made very useful. Gram doses of sodic salicylate five times daily are said to have abolished the power for three months.

TREATMENT OF NOCTURNAL ENURESIS.—(*The Doctor.*)

Kelp treats this affection by weak doses of nitrate of strychnia injected subcutaneously in the region of the sacrum. One or two injections, the second some days after the first, are usually sufficient.

ENORMOUS CONSUMPTION OF QUININE IN THE RUSSIAN ARMY.—The Russian military hospitals have consumed, during 1877, six thousand kilogrammes of the sulphate and three thousand kilogrammes of the chloro-hydrate of quinine. Enormous as this consumption is, it will be exceeded by that of the current year.—*Lyon Méd.*

Items.

ON THURSDAY, DEC. 19TH, Professor Gunn, after a severe and protracted illness, made his first appearance before the class at Rush Medical College. The Professor was too much prostrated to make any attempt at lecturing, and therefore contented himself with greeting his friends.

In honor of the event, the class had determined upon a welcome with floral decorations. The upper lecture room, where the professor is accustomed to deliver his valuable surgical lectures, was most tastefully decorated with plants, flowers and evergreens. The blackboard, where usually can be found the announcements respecting "material for class," etc., was covered with white cloth, and trimmed with evergreens and holly. In the centre was the word "Congratulamus" in large evergreen letters. Above the blackboard the wall was also tastefully decorated with evergreens and holly. In the centre—in its accustomed place—was the bust of Dr. Gunn's predecessor, Professor Brainard. Immediately at the foot of the middle aisle, upon the rail, was placed an elegant stand of flowers, the base of which was about six feet in circumference—a solid mass of camelias, tuberoses and carnations. Rising from this was a large basket of flowers pyramidal in shape, surmounted by a lilly, with camelias and tuberoses thickly scattered around it. A small wire stem, tastefully decorated, and rising from the main basket, supported the monogram M. G. At the foot of each of the two other aisles was placed a large basket of flowers, somewhat similar to the first, but not so large. Two baskets, of intermediate size, were placed upon the shelves or tables at the sides of the arena. Plants were thickly scattered about, and the place had an appear-

ance so very unusual that probably none of the professor's clinical patients who visit him there on Saturday afternoons, would have recognized it as the arena where epithelioma, necrosed bone, etc., had so often yielded to the touch of the operator.

Mr. Miller, the class president, welcomed the professor in a few well chosen words, expressing the delight of the members of the class in receiving their honored professor, after his narrow escape from the "king of terrors," and presented to Dr. Gunn the main stand of flowers.

The professor's strength would not permit an extended reply, and after expressing his thanks to the class in a very appropriate manner, he withdrew.

Three cheers were then proposed, and the proposition was most heartily responded to.

The class then dispersed, to meet again at 4 o'clock to listen to Prof. Parkes, who has so ably filled the chair of surgery during the absence of its regular occupant. L. C. W.

JUSTICE TO DR. SIMS.—Several medical periodicals in this country have lately published paragraphs containing statements similar to the following, which we find in the *Detroit Lancet*, of Nov., 1878:

"A correspondent of the CHICAGO MEDICAL JOURNAL states that all the patients Dr. J. Marion Sims operated on while in Vienna, died within ten days of peritonitis."

It was the *Boston Medical and Surgical Journal*, we believe, that first gave prominence to this item, and that subsequently explained the manner in which the error was committed, by which an unnecessary reflection was cast upon Prof. Sims' skill as an operator.

Our Vienna correspondent, writing under date of July 15, 1878 (see Sept. No. of CHICAGO MEDICAL JOURNAL AND EXAMINER, p. 295) uses the following language:

"Among these (operations) he (Dr. Sims) did three for the removal of cancerous portions of the womb by a method called by the Germans the "Trichterförmige Excision," which consists in cutting away with the scissors, a funnel-shaped portion of the cervix uteri, extending, when necessary for the removal of the

diseased tissue, into the body of the womb itself. In fact, as done by Dr. Carl Braun, the procedure consists in removing the whole lower portion of the muscular tissue of the uterus, close upon the edge of the peritoneum. Dr. Sims' patients operated upon here, all died of peritonitis within ten days of the operation."

In other words, the three operations, all done for cancerous disease and all involving the tremendous risks of the grave Trichterförmige Excision, terminated fatally.

The great difference between this statement and the isolated sentence which is going the rounds of the medical press, must be apparent to all. Justice to our eminent countryman, now abroad, should lead all our contemporaries who have made the blunder to retract their statements.

MR. SPENCER WELLS.—We have recently published a series of papers detailing results in ovariotomy by British and foreign surgeons, such as may well make all Englishmen glad and proud.

If ovariotomy is now, as the results of Spencer Wells, Keith, Nussbaum and Knowsley Thornton show it to be, an operation which is not so hopeless and desperate as to seem unjustifiable even in the face of surely impending death from ovarian disease; if it is now an operation which gives but two deaths in forty-nine cases (and these two cases specially and palpably unfavorable for operation), that grand achievement of science and magnificent boon to humanity is due mainly to the ceaseless exertions of a British surgeon, Mr. Spencer Wells. His name, illustrated by such associations and bound up by undying recollection with the most splendid progress in modern surgery, needs no other decoration. But how strange a commentary on the principles on which the scanty honors of the state are distributed among members of our profession, that it should stand thus undignified in the sense in which alone sovereigns and states can dignify the princes of science or recognize their enduring services to mankind. Had Mr. Wells improved some engine of destruction, he might long since have been gazetted K.C.B. Had he amassed great wealth by selfish means or for selfish ends, he might have been ennobled; in the legal profession he would long since have been on the woolsack, or in the church a spiritual

lord. Had his services, of however ordinary a kind, been to the court even in his own noble profession, he could hardly have been long left undistinguished. But, as it is, the name which is throughout the world one of the chief glories of England, as a benefactor to humanity by a specially valuable and touching addition to our means of saving much-loved lives, is also a standing reproach to the indifference with which the highest kind of achievement in life-saving is regarded in governing circles and by the advisers of the crown in the distribution of the honors of which it is the source.—*British Medical Journal.*

IT is generally known to the medical profession and those interested in bibliography that Dr. John S. Billings, Surg., U. S. A., in charge of the National Medical Library, at Washington, is now ready to print his great "National Catalogue of Medical Literature," as soon as Congress grants an appropriation for the purpose. This indexes under subjects, and by authors, books, pamphlets and original papers in nearly all the medical perodicals of the world; including over 400,000 subject entries, and making ten volumes royal 8vo of 1,000 pages each. This will be of the greatest value to physicians the world over, as it enables them to find analogues for peculiar and difficult cases, and thus often to save lives. In continuation of this work, it is now proposed to publish monthly, under the editorship of Dr. Billings and of his assistant, Dr. Robert Fletcher, M. R. C. S., a current medical bibliography under the title of the *Index Medicus*. It will be issued by F. Leypoldt, the bibliographic publisher, 37 Park Row, New York, at $3 per year, and will enter all medical books and index the leading medical journals and transactions in English and other languages. A full list of the latter, numbering over 600, will form a part of the specimen number of the *Index*, soon to be issued.

SUITS for malpractice are so common as to constitute an epidemic in the State of New York.—*Buffalo Med. and Surg. Jour.*

THE science of the physician is above the assertions of the patient.—*Ricord.*

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Jan. 13 and 27.
West Chicago Medical Society—Mondays, Jan. 6 and 20.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.
Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Dr. Hyde; 3 p. m., Medical, by Dr. Bridge.
Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.
Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.
Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman; 4 p. m., Diseases of the Chest, by Prof. Ross.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.
Woman's Medical College—11 a. m., Ophthalmological, by Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.

THE

CHICAGO MEDICAL

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VOL. XXXVIII.—FEBRUARY, 1879.—NO. 2.

[In these pages dimension and weight are expressed in terms of the Metric System, and temperature in degrees of the Centigrade Scale.]

Original Lectures.

ARTICLE I.

ON PUERPERAL VAGINITIS AND LACERATION AS CAUSES OF VESICO-VAGINAL FISTULA. Clinical lecture by WM. H. BYFORD, M.D., Prof. of Obstetrics, Chicago Medical College.

Gentlemen: The main object I have in view in my clinical lecture to-day, is to develop more fully than has yet been done—so far as I am informed—the *modus in quo* of the formation of vesico-vaginal fistula from prolonged pressure of the fœtal head in passing through the pelvis. You have no doubt been surprised at the great damage to the soft parts in one case we have in the Mercy Hospital, resulting from ignorance and negligence in the management of, or rather mismanagement of, her labor; and without a somewhat detailed account of the morbid processes following the confinement, you would hardly be able to comprehend with any clearness how they were effected.

I will relate in a concise manner the history of the labor so far as we were able to get it, and again describe to you the condition of the pelvic viscera when we made the examination. I think the ex-

planation I intend to give you will be more interesting and instructive, if I add a short account of the case upon which you saw me operate yesterday. The resulting injury was very much less in this than in the other case, but it was brought about by the same cause—an impacted head—and the subsequent vaginal inflammation was the same in character; differing however very greatly in degree. I will conclude the lecture by a third case recently operated on in your presence, in which the accident originated in a very different manner, and call your attention to the widely different conditions of the vaginal cavity, and the appearance of the fistula itself. If I am successful in making myself understood I think I will prove to you that the effect of the after mismanagement of these disastrous cases of midwifery was as pernicious as that of the labor itself, and that much of the resulting damage might have been avoided by judicious subsequent treatment.

Our first case is Mrs. W—— from western Iowa. This patient, gentlemen, is a primipara, twenty-five years of age. As you are aware, she is now in the hospital the second time. Last April she first entered the institution in a very enfeebled condition; three months after her confinement. She then was suffering great pain in the pelvic regions, of a dull aching character, with a sense of great heat where the vagina ought to be, her pulse was steadily over one hundred strokes to the minute, and her temperature from one to two degrees above the normal standard; she had a very poor appetite, and was under the necessity of taking some form of opium to secure rest at night. She was greatly emaciated, and prostrated to such a degree that she was unable to sit up more than a few minutes at a time. Her extremities were cold and bathed a good share of the time in a very liquid perspiration. When we came to examine the vagina, we found it to be the receptacle of urine and fœces; the whole of both of these excretions passed through the canal, which was large and very irregular in shape, bearing no resemblance to the normal vagina. Upon separating the labia, we found about three quarters of an inch of the urethra left, the internal portion of it entirely gone; no trace of vaginal mucous membrane could be found, except a small patch just above the perineum on the poste-

rior wall. Above this the recto-vaginal septum was removed for two inches, and for this distance the posterior part of the great irregular cavity was formed by the mucous membrane of the rectum; at the upper part of the recto-vaginal opening was a dense semilunar cicatricial band sweeping half way around the pelvis, the left hand extremity of which terminated lower down than the right. The anterior and much of the lateral walls of the cavity were formed by the mucous lining of the upper wall of the bladder, so much of the substance of the bladder was gone that there was not enough left to collapse into this cloaca. The perineum was very deficient, measuring only about half an inch anteroposteriorly, but so much of the external sphincter was left as to contract the anus very firmly; several large cicatricial deposits bound the sides of this great cavity to the pelvic bones. The external organs were inflamed and excoriated so as to add very much to the suffering of the patient. As you see her today, after a lapse of six months, she is very much improved in general health, she has the color, flesh and vivacity of good health; and comes to us, hoping to have an operation performed that will restore the integrity of the vagina, and is very much disappointed because she is told that the time has not come to make any surgical effort to improve her condition. We find however that nature has made a wonderful improvement in her local condition.

I forgot to say to you that in the first examination I entirely failed to find the os uteri.

The whole vaginal cavity is very much contracted and the cicatricial bands more prominent than at the first examination, and the opening into the rectum has decreased in size to such an extent as to prevent the fæces, when hard, from passing through it, and now she actually evacuates a portion of the contents of the rectum through the anus. Now what is the best we may hope for by an operation in the future? It is not unreasonable to suppose that, after a while, we may be able to close the recto-vaginal fistula, and then by closing the vulva, enable her to pass the urine through the urethra. This is all I think we shall ever be able to do for her. But this will very much improve her condition. I cannot yet find the os uteri, although I can feel the body

of the uterus through the rectal opening. She has not menstruated, and it is probable she never may. Possibly the uterine cavity is not obliterated, and it may communicate through some very small undiscovered canal, with the vagina, or the vesical cavity may be so completely obliterated as to cause the menses to be retained. Let us look at the obstetrical history of this case. It is very imperfect, but yet sufficient is revealed to enable us to get at the main facts. She was confined in the latter part of January, 1877—she was in labor three and a half days, during the last two of which the head of the fœtus rested in the pelvic cavity. She was at last delivered by the perforator and crotchet. She was first attended by a midwife, who for three days held out the hope to the patient and friends that nature would deliver the woman "all right." At the end of this time a physician was called in, but having no instruments a further delay was necessary before a second could be procured with the requisite means of terminating this disastrous labor. The child of course was dead, and in a state of decomposition when delivered; the patient was in a state of great exhaustion, and for several weeks her life was jeapordized by what was called puerperal fever. On the fourth day the discharge from the vagina became very fetid, and masses of flesh, as the woman expresses it, passed or were removed from the vagina by the attendants, and on the sixth day the urine and fæces commenced to pass the vaginal orifice. It was a month before hopes of her recovery were indulged in, and she was barely able to be brought from her home in a palace-car to Chicago, in three months from time of confinement.

Before making any comments on this case let us review the history of the second case, that of Mrs. M——, from Michigan, whom we operated upon yesterday for vesico-vaginal fistula. She is also a primipara, thirty years of age, she is a very large fleshy woman, weighing over two hundred pounds. She was confined in January, 1878. Her labor is described by her and her friends as very severe and protracted. From her statement there can be no doubt but that the head remained immovable in the pelvis for twenty hours, when it was removed by the forceps. She was in care of a midwife, who assured her from time to time, that the child was about to be born, as it could be

seen when the external parts were pressed open. This declaration enabled the midwife to postpone the call for aid, until, as before stated, the head had been in that position twenty hours or more. At the time she was delivered the patient was very much exhausted, had vomited a number of times, her extremities were cold, pulse rapid and her mind wandering; in ten or twelve hours re-action had taken place, the temperature was increased, the pulse remained frequent, the external parts were swollen and there was tenderness and tumefaction in the lower part of the abdomen. I could not learn that the urine was evacuated by the catheter at any time, but the patient assured me that she passed it in small quantities through the urethra. For two weeks she had what was called a mild form of child-bed fever. During this time there were vaginal discharges that became very offensive, and in something over a week the urine commenced passing involuntarily; at first, it was supposed, through the urethra, but finally there could be no doubt that it all came by way of the vagina. Although we cannot arrive at definiteness, I think we are justified in saying that as early as the eighth day the fistula between the bladder and vagina was established.

When she came here an examination revealed a fistula 4 Cm. in the long diameter and about $2\frac{1}{2}$ Cm. in the shorter. The upper end of the opening extended to the left of and involved the cervix about 1 Cm. The lower extremity reached across the median line of the vesico-vaginal septum, and extended down to the urethra. This description, as you see, makes the direction of the fistula oblique to the general direction of the vagina and ovoid in shape. This fistulous opening must have resulted from a considerable loss of tissue by sloughing or ulceration or, more probably, both. Fortunately there were no cicatricial bands, the uterus was quite movable, and the vagina supple and otherwise healthy.

This description of these two cases is given with a view to illustrate the usual manner of their occurrence. You can hardly doubt, from a review of the circumstances attending the labors, that protracted pressure of the fœtal head upon the soft parts nipped between the solid bones of the skull and the bony pelvic wall, was the cause of the vesico-vaginal fistula. This cause is recognized by most writers upon the subject, and thus far their

explanation and testimony as to the occurrence of the accident is clear and to the point. The general expression of the manner in which this pressure acts, is so loose and uncertain, however, as to mislead the student, both in his understanding of the process through which the damage takes place and the proper method of treating the consequences. The idea conveyed is that the pressure of the head produces sloughing, and that the fistula is left as the result of the loss thus arising. We are led to infer that this loss of tissue is the immediate effect of the pressure, that death of the portion of the vaginal septum takes place at the time of the pressure, and consequently the damage is both immediate and irremediable. That embarrassment of the capillary circulation in some of the more aggravated cases may be so great, as to make reparation impossible, I can conceive; but from somewhat extensive observation I am convinced that these cases are exceptional, and that by an intelligent understanding of the subject, the sloughing might be avoided in a large number of cases, and in all greatly limited in extent; indeed I believe that sloughing in the proper sense of the term is not generally the cause of the fistula, but that it is more frequently the effect of extensive ulceration.

One of the best authorities on the subject of vesico-vaginal fistula, Dr. Emmet, of New York, read an elaborate paper at the recent meeting of the American Gynæcological Society, in which he tabulated the conditions under which it occurs. The only point made in that paper to which I desire to call your attention, is that the *average* time in the 161 cases therein mentioned, when the urine made its appearance in the vagina, was nine days after delivery. In some cases the time was, of course, much longer; in others, much less than this average time; but in none did that excretion find its way through the septum immediately after the birth of the child.

The question naturally arises, in this connection, what was transpiring in the vagina from the time of delivery up to the period of the completion of the fistulous opening and the appearance of the urine in the vagina? Can it be that one, two and sometimes three weeks are required for the separation of a slough formed at the time of delivery? I think not, and again say that I

believe immediate death to the parts involved is the rare exception.

Then how is the fistula usually produced?

I answer, by the ulceration attending the severe inflammation caused by the detention of the head. Sometimes, doubtless, the ulceration is preceded by sloughing, but not always, and when thus preceded by the sloughing of a part of the thickness of the vaginal wall, the ulceration destroys the remaining substance at that point.

For twenty years I have been in the habit of describing in a distinct manner to my classes what I call puerperal vaginitis. In my work on the "Medical and Surgical Treatment of the Diseases and Accidents Peculiar to Women," the first edition of which was published in 1865, I have devoted a section to the description of this affection. You will there find the causes, symptoms and mode of treatment given with a view to avoid the disastrous consequences that usually result from the disorder, and I am convinced that if the teaching there given were properly followed out, that vesico-vaginal fistula would often be avoided, even after the protracted retention of the head had initiated the processes which, if not arrested, would eventuate in that deplorable lesion.

As you have seen by the imperfect history of the two sample cases I have detailed, the subjects of these badly conducted labors are left in a state of great exhaustion, which is followed by a rapid pulse, elevation of temperature and other symptoms of a low grade of inflammatory fever, the severity of which is indicative of the amount of mischief going on in the vagina and neighboring viscera. Locally there is tumefaction of the lower portion of the abdomen, with tenderness on pressure; the labia and perineum are swollen and very sensitive, and the whole vaginal cavity is hot, dry and tumefied; the urethra is inflamed and very tender to the touch, and either from this condition or partial paralysis of the bladder, or both, the urine is retained. In a short time the discharges from the vagina become muco-purulent, a little later fœtid, and before long shreds of decomposed mucous membrane and fibrous tissue escape, and eventually urine makes its appearance among them. A careful

examination of the vaginal walls with the finger, on the second day and thereafter, will detect patches more tumefied and roughened, pointing out the localities where the walls are on the point of yielding to the processes of ulceration and sloughing.

In some instances, no doubt, these ulcerating points mark the boundaries of necrosed patches of the vaginal wall, and in rare cases a slough does separate the whole thickness of the septum; but in the majority of them the slough, when it drops from its position, only partially perforates the vesico-vaginal septum, while ulceration completes the damage. Frequently, however, especially in the less grave forms of injury, ulceration does all that is required to lay open the division between the vagina and bladder. In the former and more intense forms of injury, the perforation will take place in four or five days; in the latter, less mischief is done, and the urine does not flow from the vagina until one, two and in some instances three weeks have elapsed. I am sure you will agree with me, gentlemen, that in this time there is ample opportunity to palliate or lessen the consequence of the damage done by the pressure of the fœtal head in all cases, and in some to completely save the unfortunate patient from the disastrous condition presented in our second case. As I am not now dealing with the obstetrical aspect of this question, I do not think it necessary to speak to you of the management of labor as a preventive measure. You will be taught that branch of the subject by my very able associate, in a manner that will enable you to avoid all difficulties of the kind when you have exclusive management of cases of impacted head.

Before detailing the treatment necessary to be followed after these neglected cases of labor have terminated, I desire in a more emphatic manner to call your attention to the condition of the bladder as one of great importance in effecting subsequent mischief. It may be incapable of expelling its contents, so that it becomes distended, and the vesico-vaginal septum stretched to such an extent as to encourage and perhaps complete the breach of continuity; the sloughing and ulceration have begun by simple traction on the weakened points. But this is not all; the capillary circulation in the distended part is so embarrassed as to

promote ulceration, while the weight of urine on the septum is another item of mischief.

Of the treatment then I should say, that to maintain an empty condition of the bladder is the first requisite, and is indispensable to success. The sensitiveness caused by the inflammation will sometimes render this a difficult task. In most instances, however, the bladder will tolerate one of Dr. Sim's catheters. This instrument, armed with an elastic tube long enough to carry the urine into a receptacle by the side of the bed, will keep the bladder empty, at the same time that it prevents that secretion from coming in contact with the inflamed labia. The stationary catheter will cause less irritation than the frequent introduction of one for the same purpose. Another thing quite important is to prevent distension of the rectum by fæces and gas, by first washing that organ out thoroughly, so as to free it from all solid contents, and then placing an elastic tube in it to permit the escape of flatus. The vaginal inflammation should be treated for the first day or two by large injections of hot water from four to six times a day, for the purpose of stimulating the capillary circulation, and keeping the vagina clean. When shreds of membrane begin to make their appearance or the discharges to contain pus, it will be necessary to examine the vaginal walls with the finger to ascertain the locality of the slough or ulcer. On the anterior wall just behind the symphysis, and perhaps a little to the left, the roughened, uneven surface will indicate the position, size and depth of the mischief going on. To these places special attention should be directed; applications should be made to them with a view of arresting the ulcerative process. By means of a flexible tube or a Lente's ointment carrier, directed by the finger, we may make almost any desired application; one of the best I think is a solution of sulphate of copper of the strength of ten grains to the ounce of water. This can be thrown upon the parts through a tube in quantities just sufficient to saturate the surface once a day. A solution of nitrate of silver of about the same strength will also answer a good purpose. These local applications will not enable us to dispense with the use of the large hot water injections; these must be kept up steadily. I have no hesitancy

in believing that I have on several occasions prevented the perforation of the bladder by this course of treatment.

We should by no means neglect general treatment in these important cases. The internal administration of quinia and iron, and liberal nourishment are all-important to improve the reparative powers of the system; while the judicious use of opium will relieve the pain and suffering which are sometimes very great. The treatment should be persevered in until the ulceration is entirely healed.

Before closing my lecture, gentlemen, I wish to call your attention to another case which I presented to you a few days since, as illustrative of another much rarer course of vesico-vaginal fistula, viz: that of Mrs. M——, 28 years of age, from the interior of this State. She is a small woman, muscular and of very vigorous form. She was confined with her fourth child, five months before entering the hospital. Her three previous labors have been natural and of quite short duration. The last labor terminated in about four hours from the time of commencement; her physician did not arrive until a few minutes before the expulsion of the head. When he made an examination he found the bladder prolapsed, and pressed very forcibly out between the labia. He first thought the protrusion was the bag of water, but before he had time to verify his diagnosis there was a gush of fluid and the head was delivered. The rest of the fœtus was almost immediately expelled, and was soon followed by the membranes and placenta.

At this time the true state of things was not suspected, but the continued dribbling of urine led to a digital examination and discovery of the fistula. From this statement of the case we cannot doubt but that the distended and prolapsed bladder was torn by the force of uterine contractions. I have never before known this accident to occur; whether there are such cases on record I am not prepared to say.

At the time of the operation, I drew your attention to the fact that while this fistula extended from the cervix uteri to the urethra, it was in the form of a fissure. There was no loss of substance as is always the case in fistula caused by puerperal vaginitis.

Original Communications.

ARTICLE II.

NOTES ON PLACENTA PRÆVIA, WITH REPORT OF A FATAL CASE.

By E. O. F. ROLER, M. D., Professor of Obstetrics, Chicago Medical College. Read before the Chicago Gynæcological Society, Dec. 27th, 1878.

The importance of placenta prævia as a dangerous complication of labor, will be my apology for selecting it as the topic for discussion this evening.

No other complication in midwifery involves greater peril to mother and child; none other demands prompter action more vigilant watchfulness and discriminating judgment. And yet the treatment is by no means definitely settled. All methods thus far adopted are liable to fail in good results, and we are yet in uncertainty as to the comparative value of the modes of treatment which have been especially recommended for the prevention of hæmorrhage.

Among authorities, opinions have varied with regard to the exact situation of the placenta on the inner surface of the uterus; and the different views entertained concerning the vascular relations which obtain between its structure and the maternal system have determined, to a considerable extent, the management of these cases during labor. The subject, however, is of vast proportions, and I do not propose attempting an elaborate or even systematic discussion. I intend simply as preliminary to the report of a fatal case which came under my care, to mention a few of the more important points embraced in the subject, making comments thereon as expressions of my own opinion, and leave the further discussion to the members of the society.

The possibility of the descent of the ovum beyond its strictly normal position in the uterine cavity, must depend on two accidental circumstances:

1st. Failure to make *prompt* attachment near the Fallopian tube after its entrance into the cavity. This might be owing either to a faulty deciduous formation at the time of its arrival, or it is possible that the ovum, not becoming fecundated until a later period, would find neither the mucous surface prepared for its reception, nor its own vitality sufficiently changed to admit of adherence.

2nd. The mucous surfaces of the body of the uterus must be separated to such an extent as to furnish an easy passage through its cavity. This condition is less likely to exist in primiparæ, and statistics prove that, as a class, they are exempt from this accident. Inflammatory conditions of the mucosa would especially favor this patent state of the cavity of the organ. These conditions being present, gravity, aided possibly by the flow of secretions, would carry it downward beyond the zone of normal attachment.

LOCALITY OF PLACENTA PRÆVIA.

Authorities are not agreed in regard to the possibility of attachment of the ovum within the canal of the cervix.

Barnes, in his "Obstetric Operations," makes his theory and his practice contradictory. He agrees with Stoltz and Mathews Duncan in the opinion that the cervix is in no way involved in the reception of the ovum, while later, in making his imaginary zones, he makes the orificial, or cervical region, the seat of dangerous attachment for the placenta.

Rigby and Lee, among the older writers, Cazeaux and Bell among the more recent, insist that the ovum occasionally finds an intra-cervical location.

In a patent state of the os internum this would seem to be possible. The neck, however, is as separate anatomically as it is functionally from the body of the uterus. The mucous membrane of its cavity is entirely unlike the cavity of the body, and does not participate in the changes which take place in the latter in the event of fecundation of the ovum. As a consequence, the deciduous formation is entirely absent. Admitting, however,

its growth in this situation, abortion at an early day must be inevitable. In the process of expansion of the neck, the os internum would as effectually prevent invasion upward as it does downward when the ovum is lodged within its normal cavity.

The os externum having less power of resistance would soon become dilated, and the ovum becoming uncovered and without proper support, its early discharge would be insured. The process would probably be aided by reflex irritation from the neck, inducing contraction in the muscular walls of the body of the uterus.

I have met with at least one case of this kind in my own practice. Profuse flowing occurred toward the end of the third month of pregnancy, with the usual symptoms of expulsive effort. The placental attachment was distinctly felt just within the partly dilated os. Its artificial removal was followed by persistent and finally alarming hæmorrhage, which could not be controlled by ice in the vagina nor by the administration of ergot. An injection of dilute ferric persulphate at once and permanently arrested it.

Barnes, in defining the limits for the situation of the placenta in prævial presentations, does not require that it should overlap the os internum. If any portion of the placenta find attachment within his cervical zone, "whether it consist in flap encroachment downwards, or whether it be the entire placenta," the condition exists for all the phenomena of prævial presentation. His language on this point is obscure, but he leads us to infer that while the ovum is primarily situated above the internal os, the cavity of the cervix is invaded by the placenta in the process of development.

If we are to accept the diagram introduced in his work as an illustration of his views, the dangerous area of attachment, consists almost entirely of the cervical cavity. The fact of its situation *over* the neck is of no importance, in his estimation of the danger of hæmorrhage, provided there is no encroachment upon this cervical area.

Dr. Ch. Bell, in a paper read recently before the Edinburgh Obstetrical Society, a report of which I have seen in the *Obstetrical Journal* since the last meeting of this society, while refuting the opinion of Barnes in regard to a cervico-orificial placenta, it

seems to me, falls into a like error in giving a definition of his own. His statement is that it is attached to the lower segment of the uterus immediately "within the internal os," which it may cover either partially or entirely, and its development goes on as when placed elsewhere *paripassu* with that of the uterus.

My own definition of placenta prævia would be implantation *over* the os internum within the cavity of the body of the uterus. It may have all degrees of extent in situation; the expressions "partial" or "complete" having practical value only in the unavoidable hæmorrhage which occurs at the time of labor.

CAUSE OF HÆMORRHAGE DURING UTERO-GESTATION.

The current opinion has been and is still held by some, that during the latter months of pregnancy the neck of the uterus undergoes rapid development. The area of the placental site in consequence becomes enlarged, and is finally torn asunder from the placental attachment, and hæmorrhage results. Even admitting an intra-cervical implantation, this explanation is not verified in the history of many cases which have come under observation.

If this be a law of uterine development, the physiological expansion of the neck, upon this hypothesis, must invariably be attended by hæmorrhage during the progress of pregnancy. But this is by no means the case. Clinical experience teaches that while ante-partum hæmorrhage frequently occurs in placenta prævia, it is not only uncertain as to time and frequency, but is occasionally absent. This fact alone, I may remark, is proof beyond question against the doctrine of development of the neck during the latter months of utero-gestation, concerning which there has been so much discussion.

Barnes, in treating of this subject, more with a desire, it seems to me, for originality than consistency, insists that the very reverse of these conditions occurs during the growth of the placenta. According to his view, the placenta is endowed with much greater vitality than the uterus. The area of uterine attachment does not keep pace with its own development. As a consequence, the placenta outgrows its base, springs away from its attachment, and hæmorrhage is the result.

Is not either of these hypotheses at variance with what seems to be an ordinary law of growth in the animal economy? A neoplasm or growth of any kind, physiological or pathological, although differing in structure from its base, maintains its equable relations with it in consequence of the blood supply upon which its vitality and increase of tissue depend. If the vascularity of the underlying tissue be lessened, from either natural or artificial causes, in like proportion will the part supplied by the ultimate distribution of the vessels be affected, and the reverse of these conditions also is true. In cases of incomplete abortion, where the placenta remains adherent after the embryo is destroyed, its nutrition is modified in proportion to the arrested development of the uterus. The structure is more compact, less vascular and the area of attachment is not increased.

A like example occurs in extra-uterine fœtation, where the placenta is implanted on tissue still less adapted to its growth than the cervical portion of the uterus. Strangely enough, Dr. Barnes cites instances of tubal pregnancy as a proof of the correctness of his opinion. "Hence," says he, "in the case of a tubal gestation, there comes a time when the growth of the ovum is so rapid that the tubal sac is unable to keep pace with it, and it bursts." I reply that it is not the placenta which bursts away from its basis of tubal tissue, and which is the point at issue. The accident is the result of increasing weight, rather than over-distension, the muscular fibers being unable to afford adequate resistance. In my opinion, therefore, these theories of unequal development of either placenta or uterus are physiologically untenable.

I hold to the doctrine entertained, perhaps, by a minority of obstetric physiologists, that the causes of hæmorrhage in prævial placenta, instead of being unavoidable, are strictly *accidental*, until near the end of gestation, when the painless tonic contractions set in, which precede the phenomena of active labor. One of these accidental causes is certainly the occasional premature dilatation of the supra-vaginal portion of the neck, rupturing some of the utero-placental vessels near the margin of the internal os.

This dilatation is entirely passive on the part of the neck;

not caused from development of its tissues, but by becoming softened in the vital act of preparation for the passage of the fœtus, the weight from above presses it asunder and separates its attachments. Further, the situation of the placenta on the lower segment of the uterus, where the walls are subject to varying pressure against the brim of the pelvis, to which is added the weight of the fœtus above it, would furnish conditions especially favorable to accidental detachment. It is a well known fact, however, as I have already stated, that not infrequently the period of utero-gestation is completed in placental presentations without the occurrence of hæmorrhage.

SOURCE OF HÆMORRHAGE.

Does the flow of blood come from the open uterine sinuses, or from the detached portion of the placenta? It can scarcely be said that the anatomy of the placenta is as yet perfectly understood. The doctrine, however, of a free maternal circulation in its substance is generally accepted. Utero-placental arteries, slender and tortuous and without contractile sheaths, carry arterial blood into the lacunæ, or blood-pools, which bathe the tufts of the chorionic villi. These pools empty into the utero-placental sinuses, or emulgent veins. Hence there is no capillary circulation in the maternal placenta, but a direct flow of arterial blood into sinuses of large caliber. These vessels of the placenta, even the arterial, if we are to accept the authority of Virchow, lose their coats entirely on leaving the surface of the uterus, and are mere expansions of the serotina in its sheath-like ramifications about the tufts of the chorion. While it is generally admitted by those who advocate a placental source, that a moderate hæmorrhage takes place from the open uterine sinuses, it is asserted that the dangerous loss occurs from the partially separated placenta. Simpson and Mathews Duncan are especial advocates of this doctrine of the placental source of the hæmorrhage.

I can only remark that, with my limited experience in this class of cases, I have come to no definite opinion on the subject, but have a bias in favor of the older doctrine of hæmorrhage direct from the uterus. This view is the most rational one, and the opposite is

based on theory rather than proof. The main argument brought forward by its advocates is the fact that a backward flow must take place in the uterine sinuses; whereas, in the placenta, the flow is direct through channels of large caliber, aided by the *vis-a-tergo* of the maternal arteries.

We know, however, from experience, that the open uterine sinuses *are* the source of profuse hæmorrhage in atonic states of that organ after labor. Again, if the hæmorrhage occur by way of the utero-placental arteries, ought not the blood to be arterial instead of venous, as is commonly observed? I regard the question as yet an unsettled one, to be decided by further investigation.

TREATMENT.

It is but seldom that a case of placenta prævia can be left entirely to nature. Active measures are generally required to avert the dangers of hæmorrhage, and the safety of the patient will be in proportion to the efficiency of the means used to prevent it. When labor sets in, the hæmorrhage must be regarded as unavoidable; because partial or complete separation of the placenta is inevitable. The expansion of the neck is not the only factor in causing it. The advancing part of the fœtus crowds the placenta downward, and assists in forcibly severing it from its attachments. Finally, either the entire placenta is detached and carried onward, or, if the situation has been partial, a flap is thrown down and the cervix freed from obstruction.

This is the spontaneous detachment which nature seeks to accomplish, and which no art can prevent. The physiological limit of the hæmorrhage must be regarded as dependent on the completion of this act, provided the uterus continues in a state of active contraction, and forces the head or breech onward over the open uterine sinuses. May we not here draw a practical inference for treatment? Is not the removal of the placenta to the extent of clearing the canal for the advancing fœtus, plainly indicated, in conjunction with other measures for securing a safe delivery?

Simpson, as a result of bed-side experience, decided to remove it wholly from the uterine cavity. The practical effect was, as he found, the arrest of the hæmorrhage. But, by this method,

the child is inevitably lost, and on this account, if on no other, the operation is objectionable, if other measures can save it, especially as in some cases, malposition of child or other conditions may compel a resort to version when, if living, a safe delivery might be possible. Barnes, on the other hand, contends that the entire detachment is not necessary for the arrest of the hæmorrhage, and he proposes the separation of the placenta over an area of nearly three inches from the os, and around the entire circumference. This treatment is based on the belief that there is an anatomical limit to the area of hæmorrhage, and when this part is freed from placental attachment, reaction occurs to such an extent that the uterine sinuses are closed. This, however, is mere hypothesis, and I think further experience will demonstrate that it is founded on erroneous views, and that such a procedure oftener increases than lessens the hæmorrhage. Would it not be more judicious management, having in view the two-fold object of arresting hæmorrhage and clearing the cervical canal, to separate the placental attachment fully one-half the circumference of the neck, and when practicable, not only to rupture the membranes, but to bring down the detached portion and thus, as nearly as possible, convert it into the accidental variety? When this is done, then, as in the accidental forms of hæmorrhage, the advancing head or breach would act as a compress upon the placental vessels, as well as covering the open mouths of the uterine sinuses.

The detachment of the placenta, however, either total or in part, in most cases is but one of the steps in the series of operative measures. No routine treatment can be adopted as a general rule of practice. Until the dilatation of the os is accomplished, either by artificial or natural methods, the hæmorrhage should be controlled by the vaginal or cervical tampon. The vaginal tampon, even if firmly applied, is apt to become loosened from the relaxation of the tissues, and besides the pressure upon the column of blood above the tampon has a hydrodynamic effect in forcing it around or through the meshes of whatever material may be used for the purpose. Of late years I have discarded the colpeurynters in use, as I believe they are inferior to firm packing with plugs of oiled cotton batting.

Theoretically, artificial dilatation of the os would seem preferable as it serves the additional purpose of arresting the hæmorrhage, but in practice the difficulty of keeping the dilator in proper position by reason of the nearness of the presenting part of the fœtus, makes the attempt very generally a failure. In whatever manner, however, the plugging may be done, it usually insures temporary safety until dilatation is accomplished.

Early rupture of the membranes, in my opinion, should be resorted to only in cases of partial presentation or, at least, where the placental edge can be brought down and as nearly as possible be converted into the accidental form of hæmorrhage. Barnes directs that if hæmorrhage be present the membranes should be ruptured as the first step in the management, before the os has become dilated and, even before the announcement of labor.

I think this advice, aside from the difficulty of the operation, as a general rule of treatment, should not be followed. Clinical experience has shown that the escape of the liquor amnii, with the placenta remaining implanted over the neck, will not always arrest the flooding. In that event, the attempt at version would be difficult, and in some cases would be impracticable.

Some authorities, instead of resorting to rupture of the membranes, as recommended by Barnes, discountenance it altogether. Simpson speaks doubtingly on the subject, and advises it only in cases of excessive quantity of fluid, or when hæmorrhage cannot be controlled, with an os too rigid to admit of version or other operative procedures.

In my opinion it ought never be done as a preliminary operation. The plug should be employed until partial dilatation is accomplished. If the membranes appear within the circle of the os, they should then be ruptured as in cases of accidental hæmorrhage. If this does not have the effect to check the flowing, turning can be promptly resorted to before the uterine walls contract to such an extent as to conform themselves rigidly to the inequalities of the fœtal surface. If the implantation be central, the membranes should be reached, after partial dilatation, by separation of the placental attachment with probe or finger.

Puncture of the placental mass is of doubtful propriety. It cannot well be done without recourse to a pointed instrument,

which might injure the child; and more especially the fœtal circulation would be opened, and its death made certain from hæmorrhage.

In the following brief report of a case it will be seen that the usual measures were employed, but failed to save the patient, although the peculiar dyscrasia existing at the time of labor, doubtless contributed greatly in bringing about a fatal result.

Mrs. H., aged forty, mother of four living children, became pregnant for the fifth time in the spring of 1874. During the earlier part of her married life, she enjoyed ordinary health, but in later years had been a great sufferer from dyspepsia, and was also subject to nervous disorders. The stomach at times would tolerate only the simplest kinds of food, and during the months of her last pregnancy she had subsisted chiefly on raw eggs, milk with lime water, and occasionally, stimulants.

For years she had been subject to profuse menstrual discharge, amounting at times to flooding. These attacks caused debility, but she usually rallied rapidly, and had come to regard them with indifference. A state of hydræmia seemed to be established, and the impoverished state of the blood and defective nutrition were apparent in laxity of tissue and in general emaciation of the body. This lack of tissual tonicity had been noticed especially during a previous confinement, at which time she first came under my care.

As the os dilated, thrombi formed in both uterine labia; the anterior, about two-thirds the size of an orange, descended so as to lie outside the vulva, at the moment of expulsion of the head. The placenta came away promptly, and while no great hæmorrhage followed its removal, the drainage persisted to a moderate degree, much beyond the ordinary puerperal term. The condition of the neck at the time gave me uneasiness, as I thought its tissues must have been greatly damaged by the extravasation; but the tumefaction disappeared, and as far as I could determine, with but little sloughing of the parts.

In her last pregnancy, the first indication of placenta prævia occurred about forty-eight hours previous to her confinement, when on rising in the morning, she was taken with painless and profuse flooding. Her husband came for me immediately, but

being ill at the time, at my request, he went for Prof. Nelson, who on arrival found that the hæmorrhage had ceased. On examination, he found the os high up and undilated. Pushing his finger well into the neck, he detected the presence of placental tissue. He explained to the husband the probable condition, enjoined quiet, and directed that one of us should be notified promptly upon the slightest return of flooding, or if any symptoms of labor should occur. At the end of forty-eight hours he came to my house, and stated that pains had set in and there was flowing, but he thought not excessive. I hurried to the house, taking with me my obstetric bag, containing, besides the usual instruments, a colpeurynter, Barnes' dilators, and a Davidson syringe, to which a flexible catheter was attached for injecting the uterus. I found the patient flowing freely, and already complaining of faintness. Pains short, sharp and frequent. On touching, the os was found near the brim, rigid, and dilated to the extent of readily admitting the index finger. By partly pushing the hand in the vagina, placental tissue could be felt overlying the neck of the uterus. I sent the husband hurriedly for assistance, giving him the addresses of a couple of the nearest physicians. The patient herself was perfectly calm, although she fully understood the critical nature of her condition. She was a lady of more than ordinary intelligence, had some knowledge of medicine, and between the time of Dr. Nelson's visit and that morning had read the entire article on placenta prævia in Meigs' Obstetrics. With the assistance of a couple of ladies who were neighbors, the hips were elevated and the head lowered. My first attempt was the introduction of Barnes' smallest dilator, but it resulted in failure. It may have been lack of skill, but I was embarrassed by the high situation of the os, and the placenta seemed to be crowded so closely to its edge that I could not keep it supported in position sufficiently to be caught by distension. The rubber colpeurynter was then introduced, covered with a linen handkerchief, and pushed well up into the vagina. Attaching the syringe it was filled with water to as great an extent as I dared without danger of its bursting. A dose of ergot with brandy was given, and a towel wrung out in cold water applied over the hypogastrium.

Under the action of the ergot, the pains increased and blood began to flow out of the vagina in spite of pressure and additional plugging. I now decided to resort to Barnes' method of separation of the placenta, and if possible to rupture the membranes. Hastily clearing the vagina, I introduced my hand well into its cavity, and finding the os a little more dilated, I easily swept the index finger its entire length, as I thought, around the circumference and separated the placental attachments. I could not reach the membranes, and the presenting part embarrassed the attempt as it pressed very strongly downward. I waited a few minutes, and found that the hæmorrhage instead of lessening had increased. The flow was constant, and it was noticed especially that the increase occurred in the interval immediately after the uterine contraction had ceased. Again the tampon was introduced as firmly as before, packing the vagina, however, with plugs of cotton batting squeezed out in soapy water. I intended that this should control the hæmorrhage for a time, until the os became further dilated; and, besides, the return of the husband with some one for assistance and counsel was momentarily expected.

I was confident that the head was downward, for the feet could be felt near the fundus, and movements indicated that the child was living. The pains at this stage were frequent, and she made attempts occasionally at bearing down which, though feeble, gave me hope that the os was dilating. The oozing from the vulva was moderate, and had it not been for the already enfeebled condition of the patient, it would not have especially added to the danger. But, slight as it was, and notwithstanding stimulation, she showed signs of increasing exhaustion. In addition to faintness she complained of oppression in breathing, and the uterus began to act more feebly. To add to my embarrassment the husband returned from a fruitless search for physicians. It seemed as if there was not a moment to be lost. Giving a dose of ergot with brandy and coffee, and allowing a very slight inhalation of ether, for a second time I cleared the vagina, and, with but little delay, dilated enough to admit my hand into the uterus, and passing toward the right groin, reached the membranes and ruptured them, the head being left occipito-anterior. Notwithstanding my

arm nearly filled the os, the flow of blood at this moment was frightful. The fingers were hooked over the knees and version very easily accomplished. As the hand was withdrawn, the placenta in some manner became detatched and came with it. The thighs having been brought through the os, I waited and kept up pressure over the uterus, feeling secure for the time from hæmorrhage, and regarding a little delay as important to avoid the additional shock of sudden delivery. The pains were slight and without expulsive effort on the part of the patient. The shoulders were finally brought out but the head being large, hung firmly in the lower strait, and getting no assistance from the patient, I quickly delivered it with the forceps. The child was well developed and weighed, as estimated, about eleven pounds. The uterus could now be felt moderately well contracted, but the oozing continued like a reddish watery discharge. To add to the list of my misfortunes in the case, I found that in my haste, I had seized a bottle of tincture of iodine instead of the liquid persulphate of iron. I had, however, but recently noticed in the Transactions of the New York Obstetrical Society, published in the *Journal of Obstetrics*, that iodine was recommended as a substitute for the iron on account of its antiseptic properties, and that it was equally effective as a styptic. This I diluted in the proportion of about six to one with water, and injected into the uterine cavity. The flowing ceased but the patient was pulseless, indeed, as I thought, *in articulo mortis*. Brandy and coffee were injected into the rectum, as the stomach rejected the stimulants previously given. The patient had retained her consciousness perfectly, and had scarcely uttered a complaint during the entire struggle. At this moment, to a remark made to her husband, that I feared she was dying, she whispered amid her gaspings: "I hear, what you say, no, no, I have been like this before." Pressure was kept up over the abdomen, and heat applied as much as her restlessness would permit. At the end of half an hour the pulse was felt with more distinctness, and the extremities became warmer. Exhausted as I was, I almost sank in dismay as again I saw a stream of blood flowing out of the vagina, although the outline of the uterus was well defined, and seemed to be in a state of contraction. The

diluted iodine was again injected, but death ensued within an hour after delivery.

This single-handed effort to save from death, but ending in failure, I have regarded as the most terrible experience of my professional life. In the light of that experience I should have done somewhat differently could the experiment have been repeated; but to some extent it exemplifies a fact which, I think, we occasionally realize in practice, that while the skill of the physician is often at fault, the resources of his art will sometimes fail him as well.

ARTICLE III.

CLIMATOLOGY. By F. C. SCHAEFER, M. D. An abstract of a paper read before the Chicago Medical Society, Nov. 18, 1878.

In considering the subject of the climatology of any given health resort, it would seem necessary to inquire into the natural constituents of the atmosphere, together with the modifying influences brought to bear upon it through the diurnal rotation of the earth upon its axis, the inclination of the ecliptic, the lay of the land, the contour and altitude, the quality of the soil, the varying state of the air as to temperature, humidity, rainfall, dryness, its electric and ozonic conditions, prevailing winds, and proximity to bodies of water, together with the innumerable impurities, organic and inorganic, that enter it from various causes. The subject thus becomes at the outset complicated and almost unlimited in its scope. In the present paper I propose to consider the most important merely of the topics suggested under the following heads: Temperature; Humidity; Dryness; Rain Fall; Winds; Vegetation; Contour of Land; Nature of Soil; Sea Air; Altitude; Ozone; Electricity, and Atmospheric Impurities.

TEMPERATURE.—The influences exerted by the temperature of the atmosphere upon the human organism, are not fully understood, but authorities agree in a general way upon the following points:

I. *Very warm temperature* (20° upward) produces a debilitating and relaxing effect upon all the tissues, diminishing vital

affinity. Thus occurs the lassitude of dwellers in tropical climes, and in our own climate when the thermometer remains above 20 degrees for any length of time.

The pathological sequences of great warmth manifest themselves in passive congestion of the brain, lungs, liver, kidneys and spleen, with softening of the heart and intestinal fluxes. Upon the latter point I refer to Dr. N. S. Davis' meteorological report to the American Medical Association of 1876.

II. *Moderately warm, dry, and moderately cold, dry climates* act as tonics, modified by individual idiosyncracy.

III. *Very cold temperature* is sedative, producing a decidedly soporific effect. The experience of Dr. Kane and the Arctic explorers confirms this.

IV. *Frequent diurnal changes* from warm to cold, and *vice versa*, are most pernicious, and produce the phenomena, so frequently noted, of a "common cold."

V. *Equable temperature.*—All medical authorities agree that an equable temperature, all things considered, is the best calculated to assist in the recovery of invalids, and this seems to be the chief condition in selecting a climate for patients suffering from any form of disease.

VI. From Dr. Chas. Dennison's report to the International Medical Congress, 1876, I deduce the following:

"*Warm, moist climates* in Europe are those recognized as sedative, while *moderately cold climates* are said to be stimulating.

"Heat is opposed to stimulation, so far as the nervous system is concerned, and this is demonstrated by Eckhart's experiments upon frogs. When the nerves are subjected to a temperatare much above normal, the electrical currents through them are lessened, and at last stop."

VII. *Heat in shade* is said by Pattery (Surg. R. N. of England), to have a sensible effect in increasing the temperature of the body.

WINDS play their part in influencing climates and usually very favorably by freeing the air of infusoria and noxious gases, and lowering temperature in times of great heat; but they

are equally liable to carry the former to otherwise healthful climates.

In selecting therefore a climate that may be favorable to any individual patient, we must not neglect to ascertain from what quarter proceed the prevailing winds. A wind blowing through a pine forest of some magnitude, and thence over the point of selection, necessarily carries with it an influence for good.

Again, a wind traversing a desert, afterwards blowing over a health resort, must of necessity cause a drying of vegetation and great evaporation of moisture that will result favorably or unfavorably according to the quality of soil and climate.

Among the disastrous winds of this nature may be mentioned the simoon of the Orient.

That winds purify the atmosphere of infusoria is abundantly attested by the fact that epidemics frequently diminish in intensity and disappear after wind storms, and by the comparative immunity from malarial disease, enjoyed by people living in a locality where all circumstances favorable to producing malarial fevers are present.

DRYNESS is regarded as *par excellence* the essential feature of an atmosphere beneficial for scrofula, rheumatism, catarrhal inflammation, kidney diseases, laryngitis, neuroses; and dryness in a clear climate containing no dust, is said to be decidedly beneficial in tuberculosis; but dryness where considerable dust accumulates and impregnates the atmosphere, is deleterious in proportion to the quantity of dust present. The particles of dust, it has been asserted, are frequently the active agents in producing phthisis, through an irritating effect upon the lung tissue—their accumulation here setting up a nidus of destructive inflammation, besides supporting septic germs. Prof. Tyndall has shown that dust-laden air is necessary to the existence of these organisms.

HUMIDITY is regarded differently by different authors, but statistics show that the most healthful climates as a rule, contain continuously not more than about Gms. 0.65 of moisture to the cubic foot of air.

It has been shown that in health resorts, where incipient phthisis, rheumatism, neuroses and visceral diseases improve rapidly, e is a minimum of humidity in the atmosphere, and, in sev-

eral of the most noted, the constant humidity does not exceed Gms. 0.53 to the cubic foot, when there is no rain.*

Unfortunately, we have insufficient data upon which to base positive statements; most of the records upon this subject being only relative.

Great humidity interferes with cutaneous exhalation, and produces a congestion of the viscera. This state of the atmosphere causes a general depression of the system, especially if accompanied by a high temperature. The air being loaded with moisture, there occurs a correspondingly slight evaporation from the surface of the body and its temperature is kept at its maximum.

RAIN FALL.—Rain, it is claimed, cleanses the atmosphere by washing impurities to the ground and carrying them away, when drainage is good.

The electrical disturbances accompanying rain storms are said to increase the quantity of free ozone.

The presence or absence of rain influences various climates differently, according to certain local causes, and a knowledge, simply, of the number of rainy days per month, or during the year, gives one but an imperfect idea of the character of the permanent climate; hence it will not do to be governed by the rain gauge alone in selecting a resort. What might be a surfeit of rain for one spot would prove an insufficiency for another. Considerable rain at an inland point, where the drainage is unusually good, is often of more value to the climate than the same or even a lesser quantity of rain to land on the windward side of a large body of water or upon an island in the sea, where vegetation is supplied with moisture by the more constant humidity of the air.

Again, rain storms, distributed through the year, giving a reasonable number of rainy days to each month, are *generally* more serviceable to the healthfulness of a climate than immense rain storms, with long intervals of dry weather, as may be readily understood.

In California, for instance, where no rain falls for five or six months of the year, the dust that accumulates in the air, in many localities, is so intolerable that it affects to a great degree the

* Proceedings of Int. Congress, '76. Dr. Denison.

good quality of dryness. The dust is undoubtedly frequently the exciting cause of disease; besides, the eyes of an invalid grow weary in looking upon the vast expanse of desert-like territory — nature's mantle of green being frequently entirely absent for months. Oculists would be very unwise in sending their patients to such localities.

VEGETATION plays an important feature in modifying climate, and does so by increasing the amount of rainfall.

All trees give off an abundance of oxygen or ozone and consume carbon di-oxide.

Forests intercept germs migrating through the atmosphere. The generated ozone, according to Prof. Schroeder, unites chemically with many of these conceded disease producers, destroying them. Prof. A. L. Loomis, in his recent address before the American Medical Association at Buffalo, referred to this subject in the following terms: "For some years pulmonary invalids have been recommended to take up their abode in the midst of pine forests. It has been known that they did well amid such surroundings, but why they did well has been an unanswered question. The more extensive and primitive the evergreen forests, the better adapted is the climate, to phthisical patients. The turpentine exhaled from these pine or hemlock forests, possesses, to a greater degree than any other known substance, the power of converting the oxygen of the atmosphere into ozone, thus rendering the air very pure, and consequently antagonistic to phthisical development. Experiment has shown that the direct inhalation of ozone has little, if any, power in preventing or arresting the progress of phthisis. We must, therefore, conclude that it is not the action of ozone upon the respiratory surfaces that renders the climate of localities where it is found in excess, especially salubrious, but that by its power of destroying noxious gases and atmospheric germs, the air is rendered so pure that its action is favorable upon the respiratory surfaces of those predisposed to phthisis."

Among unfavorable effects traceable to vegetation may be mentioned the development of vegetable (disease bearing) spores, which impregnate the air in many localities as the result of vegetable decomposition in stagnant pools and marshes.

Vegetation modifies *temperature*, as shown by M. Becquerel,

who, after making 1,400 observations, wrote: "Trees lower temperature by preventing the solar rays from acting upon the soil. The leaves cause the evaporation of large quantities of water by virtue of their organic activity, and increase the superficies liable to be rendered cold by radiation.

In summer the mean temperature of the air, ouside of woods, is higher than inside. In winter the reverse is true. The difference between the mean annual temperature at several miles from wood-land and that inside a wood, is about 3°."

CONTOUR OF LAND.—Local effects are exerted upon climates by unevenness of the earth's surface. Large mountain ranges greatly influence the course of winds. In North America the ranges running in general north and south, the winds blow in these directions, warm from the equator and cold from the polar region; while in Europe the main course of the great ranges being from east to west, the continent is more or less protected against the cold north winds, and hence the mountains of the south of Europe act as strong bulwarks against the excessively warm dry winds of Sahara, which are further modified by evaporation from the Mediterranean. These facts produce wonderful effects upon the climates of immense tracts of country; and to the position of mountain ranges, together with the direction of ocean streams and trade winds, are attributed, in great part, the differences in the climates of Europe and America, with reference to equability in temperature.

SOIL.—The nature of the soil increases or diminishes the humidity of the air. A modern climatologist* has written: "The peculiar dampness which acts most unfavorably upon phthisis, is not usually present where there is the greatest amount of rainfall, nor is it present because large bodies of water are in close proximity; but it mainly depends upon the nature of the soil. To avoid this dampness the soil should be porous and sandy, a loam soil of sufficient porosity to permit the rapid filtering of water from its surface, so that after a heavy rainfall the surface will soon become dry. All clay soils drain slowly and imperfectly, and the peculiar dampness arises which acts so unfavorably

* Prof. A. L. Loomis.

on phthisical patients. Lænnec states that the dampness arising from such a condition of soil, is one of the most certain developing causes ot consumption, and makes mention of a locality having such a soil, in which the dampness was so constant and of such a character, that more than two-thirds of the resident population died of phthisis."

Low soil of certain table lands and valleys, designated as marshy, and river bottoms, are very deleterious to health; holding, as they do, decayed vegetable matter in solution, which, when favorable conditions of the atmosphere are present, impregnate it with spores of various species giving rise to innumerable disorders, especially malarial fevers.

SEA AIR.—The atmosphere above the sea has a more equable temperature as a rule than the land air, owing as meteorologists inform us, to the following reasons:

I. "Because the rays of the sun penetrate the ocean to a considerable depth, and therefore produce less effect upon the surface."

II. "Because by the agitation of the sea there is a perpetual mingling of the surface with the lower strata."

III. "Because water has a much greater capacity for heat than the dry earth."

The physical forces acting in this manner, the surface of the sea is naturally less readily heated than the earth, and again cooling of the surface proceeds more slowly, because, as the heat radiates from the surface, the specific gravity of the upper stratum is increased, and it must make way for the warmer from beneath. The processes of heating and cooling being thus gradual, they result in materially diminishing the diurnal variation of temperature. The daily variation is placed by standard works on meteorology, at 2° in the torrid zone and 4° to 5° in the temperate zone. The annual range varies from 10° to 24° as one proceeds from the equator towards the polar regions, which is much less than in corresponding latitudes upon land.

The variation in temperature being so slight from summer to winter, it follows that places controlled by a marine climate, must have a comparatively equable temperature.

The sea air is said to be denser than land air generally, and

to contain an excess of ozone with consequent freedom from germs; it is therefore stimulating and invigorating, hastening the process of tissue metamorphosis.

The atmosphere being denser, there does not arise the necessity for exercise, (as we shall find in the case in high altitudes), in order to obtain a full supply of oxygen to sustain physiological processses.

There is greater humidity in sea air than in that of the mountain; but the saline element entering the former is claimed to counterbalance, in great part, the effects of humidity. M. Thaon of Nice asserts, however, that sea air is injurious to the rheumatic and dangerous for those having laryngitis and diseases of kidneys.

HIGH ALTITUDES.—The atmosphere of high altitudes is claimed to be purer, to contain less germs and more free electricity and ozone than that of the low lands. Prof. Loomis of N. Y., believing that the purity of the air in high altitudes might be the all important restorative agent in phthisis, says: "When I speak of the purity of the atmosphere, I mean not only its freedom from what are ordinarily called impurities, but its freedom from atmospheric germs. Prof. Tyndall has shown by actual experiment that the air as we ascend becomes freer and purer from those atmospheric germs. In the presence or absence of these organic substances we have a very important element of difference between the air of the low lands and the air of the mountains.

The air of high mountains is very rich in ozone. Dr. Schrœder states that ozone has the power of purifying the atmosphere—purifying it of organic substances; that its purifying power depends upon its oxidizing power; that while oxygen requires a considerable degree of heat before it will combine with other substances, ozone will do so at ordinary temperature. Ozone therefore destroys the products of decomposition by chemically uniting with them. The presence of ozone in the atmosphere is presumptive evidence that it contains no organic substances.

Dr. Chas. Denison, of Colorado, in his comprehensive report to the International Congress, at Philadelphia, 1876, claims that the electric tension of the air increases with altitude. He asserts further "that the diathermacy increases with elevation, there being

one degree greater difference between the temperature of shade and sun for each rise of about 220 feet," which he proves by experiment. The humidity decreases as the diathermacy increases. "The sun's rays being less obstructed, there is a proportionately longer influence of sunshine in each 24 hours, besides an additional excess due to a usually cloudless sky over such plains as those east of the Rocky mountains."

According to Humboldt there is a decrease in temperature of about one degree to each 300 feet of elevation.

HIGH ALTITUDES; THEIR INFLUENCE UPON MAN. The experience of scientists and travelers in the regions of great elevation is thus summarized in M. Flammarion's work on meteorology:

"*Breathing* is accelerated, impeded and becomes laborious. There occurs extreme dyspnœa after the least movement.

"*Circulation;* palpitation, acceleration of pulse, beating of carotid, sensation of plenitude in vessels, and frequent hæmorrhages.

"*Innervation;* painful headaches, irresistible desire to sleep, dullness of senses, loss of memory and moral prostration.

"*Digestion;* thirst, strong desire for cool drinks; distaste for solid foods, nausea, eructations and vomiting.

"*Functions of Locomotion;* pain more or less severe in knees and legs; locomotion causing great fatigue and exhausting all strength."

It follows from the preceding observations that high altitudes cause injury to persons suffering from: I, Disease of the heart. II, Diseases of blood vessels, as atheroma. III, Phthisis ulcerosa. IV, Individuals whose vital processes are too rapid. In some of the diseased conditions mentioned above, patients are unfavorably affected on mechanical principles, the organs mentioned being too feeble in their unhealthy state to resist the increased tension occasioned by the diminished atmospheric pressure; but they are also materially modified by increased tissue metamorphosis.

The following named pathological manifestations are considerably relieved, and in many instances almost eradicated by conditions present in high altitudes: I, Phthisis incipiens. II, Scrofulosa. III, Kidney diseases. IV, General atonic condition of entire organism.

Such abnormal states are remedied owing to the great purity of the atmosphere, the diminished pressure, abundance of free electricity and sunshine and the necessity of exercising in order to oxygenize the blood. The atmosphere in higher elevations, containing a less amount of oxygen to a given bulk of air, it becomes necessary to inhale a larger quantity of air in order to obtain a sufficiency of oxygen to exist. This of necessity causes deeper inhalations, distending the lungs to their utmost capacity, in due proportion developing these organs, together with the entire mechanism required for the respiratory function. The natives of Peruvian mountain regions are noted for their lung capacity, and their chests are said to measure considerably more than those of natives of low lands everywhere; and the same is recorded of the aborigines of the Arizona mountains.

Theoretically, and to a very great extent practically, we can safely say that the higher altitudes, with their concomitant conditions, are beneficial in the class of diseases already mentioned, and likewise in all such as require tonic treatment, together with pure atmospheric surroundings, not complicated by the pathological elements already alluded to.

I have thus endeavored to call attention hastily, to the more important elements in every climate, in order to suggest what effect the individual elements and different conditions brought to bear upon these elements, *per se*, may exert upon disease. While it is very well to consider such a subject in this abstract manner, the fact should not be overlooked that we can not prescribe this or that element separately as we might a simple drug. And herein, it seems to me, can be found the cause of so many diverse ideas and vague expressions relative to the kind of climate best adapted to various individuals. One physician orders a change to a high altitude, another to the low lands, a third prescribed sea air to all patients regardless of stage or character of disease, while still another recommends a warm climate, and so on *ad infinitum*. The difficulty in the past has been that our predecessors were eager to attribute the curative results to some one element, not bearing in mind that the same element is variously modified in different localities by local circumstances or general causes.

The empirical methods pursued in selecting climate, were of

such a nature as, in many cases, to result in the defeat of the object in view, no account having been taken of the different stages or various forms of the same malady. Phthisis being pre-eminently benefited by a change of climate, this was the first disease of which we have authentic records subjected to climatic theory. That consumptives could be improved in health in this manner, appears to have been known by the profession for fully 1800 years, and can be even traced to Celsus who, at the commencement of the Christian era, advised change of climate for phthisical patients, *providing* their strength would permit, preferring change from a rare to a denser atmosphere. Even to-day the great bulk of medical literature upon climatology is devoted to the treatment of phthisis. Fortunately, however, so far as understood at the present time, the general attribute of the climates beneficial for this dreaded malady, are almost universally of such a nature as to prove more or less useful for many pathological conditions of the human organism.

It is only through experience and long observation on the part of the more thoughtful that we have at length been led to the study of climatology, and are now beginning to recommend changes rationally based upon differential diagnosis and meteorological variations, and doubtless in a very few years there will be less conflicting ideas upon this subject.

It is needless to state that an ideal climate is not to be found for any malady, but after the therapeutic bearing of the disease—conditions to be considered in each case—their modifying influences upon each other, together with their individual and combined effect upon the human body, are once clearly understood, the physician will be much better prepared to act in each case with intelligence and proper foresight. Knowing that he has to deal with ulcerative processes in the lungs, and appreciating the fact that a high altitude is injurious chiefly on account of its stimulating effect upon the arterial system, due to diminished atmospheric pressure, he is prepared to act accordingly. He will advise a lower region, of equable, moderate temperature, of pure air, with minimum humidity, having considerable sunshine, electric tension, favorably located for drainage and for protection against injurious winds. All experience proves that these elements enter largely

into a climate beneficial for cases of phthisis ulcerosa. Here credit can be given to no one feature, but to a combination of circumstances and conditions.

Turning to phthisis incipiens, we discover a stage of a disease which can be retarded and possibly entirely relieved by proper climatic conditions. The following qualities produce, according to statistics, very favorable results: a reasonably high altitude, say 2,000 to 6,000 feet, with pure atmosphere, of equable temperature, containing considerable free ozone and electricity, with moderate dryness. This state of climate is recommended in a majority of cases of phthisis incipiens, general atony, neurosis and diseases of the kidneys and other viscera. There are, however, invalids for whom sea air is preferred, viz.: those who are incapable of taking muscular exercise, and yet whose processes of tissue change should be hastened. These are generally middle aged and old people.

CONCLUSIONS.

If we note carefully the observations of students of climatology, with reference to their bearing upon disease, we find the most healthful climate, as a rule, contain the following mentioned qualities, modified by the conditions already mentioned, the degree of superiority being governed by the number and grade of the latter elements present: equable temperature, moderately warm or cold; moderate dryness; an abundance of sunshine, strong electric tension and considerable free ozone; sufficient winds to assist in removing impurities; contour of land and nature of soil favorable for prompt drainage; moderate rain falls; the presence of bodies of water; and proximity to forests.

For a limited class or special stage of diseases we find strongly recommended: high altitude; warm or cold temperature; sea air; moderate humidity.

And finally, points regarded as universally injurious are: decided humidity; lowness of lands, especially if the soil is marshy, or of a clayey nature; *negatively*, the absence of the abovementioned better attributes.

90 WARREN AVE.

ARTICLE IV.

OUR REGISTRATION OF BIRTHS AND DEATHS. By HENRY M. LYMAN, M. D., Professor of Physiology and of Nervous Diseases, Rush Medical College, Chicago.

The numerous expressions of approbation which have greeted my article on Registration of Births and Deaths, published in this Journal, October, 1878, led me to believe that it exposes a real abuse, and also points the way to the true remedy for the difficulties there indicated. A professional friend has, moreover, placed in my hands a copy of the New Hampshire statute, bearing upon the subject of vital statistics, which is so refreshingly in contrast with the despotic and unconstitutional laws which are too often imposed upon the members of the medical profession, that I hasten to share my pleasure with my brethren by quoting the section which relates to the subject of my recent essay.

"Section 2. Every physician attending at the birth of any child in this State, or in the last sickness and at the time of the death of any person dying in this State, shall make a record of such birth or death, in conformity with the requisitions prescribed for blank records of births or deaths in the first section of this chapter; and shall annually, before the fifteenth day of April, deliver a copy of such record, for the year ending on the last day of March next preceding, to the select-men of the town in which such birth or death may have occurred. For his services in recording such birth or death as hereinbefore provided, he shall receive from the select-men the sum of twenty-five cents."

Now, there is an example of simple justice and fair dealing, which is far more worthy of imitation than any German or Russian method of despotism. I am assured that it is perfectly effectual and that in no part of the world are the vital statistics so perfect as in that little old Granite State. As we in this newly settled region are just laying the foundations of everything, it is surely worth while for us to take sufficient pains to start our laws and institutions on a *basis of justice and equity.*

In Minnesota the State values these statistics sufficiently to pay not less than forty cents for the registration of each birth and death within its borders. Certainly, if such statistics are worth collecting, they are worth paying for. If they are not worth paying for, it is simply an outrage and an insult to threaten the members of a liberal profession with a heavy fine if they refuse to give their time and their money in charity to a rich and powerful commonwealth, which is willing to pay every one but a doctor for the smallest service. Lawyers understand these things, and have so arranged everything that no one can go near a public office in search of justice without a pocket full of quarters for use at every turn. For every stamp, for every mark on paper, there must be a good round fee for some limb of the law; but when the services of a doctor are wanted by the public, it is perfectly according to rule to make him work for nothing, and to fine him twenty-five dollars if he says "No." So evident is the injustice of all this, that I doubt not it might all be changed, if some one would take the time to urge the matter with patience and perseverance upon the attention of our legislators.

Our State Board of Health is said to have been created for the protection and welfare of the medical profession. It certainly can in no way more thoroughly commend itself to the profession than by charging itself with this matter, giving us, as a first installment of benefits, the New Hampshire law.

ARTICLE V.

A PRE-EMBOLIC STATE. By EPHRAIM CUTTER, M.D., Boston, Mass.

Instances of puerperal embolism resulting in unexpected and instant death are not uncommon. This embolism is a condition in which a vascular clot plugs up a blood vessel, the plug being called an embolus. Thrombi are clots that have not become plugs or emboli. To Dr. Salisbury we are indebted for our investigation of the causes of thrombi.

According to the latter, filaments of fibrin forming clots differ from ordinary fibrin filaments. He has pointed these out in con-

sumptive blood, and I have photographed and demonstrated the same in cases in which I have sought them. The latter may be of the same chemical nature but their morphology and genesis differ. The consumptive fibrin filaments of Salisbury are minute, straight and transparent, crossing each other at acute angles, radiating from centers and interlacing like a spider's web. They exist in health but in such surpassing minuteness and transparency as to elude all but the very best objectives and observations. Whereas the consumptive fibrin filaments are large, coarse and easily detected.

If any one will anæsthetize a frog, open the abdominal cavity, expose the spleen, clip away with scissors a minute section and place it under an objective having a magnifying power of 400 diameters, he will see these fibrin cells spinning the beautiful filaments described by our author ten years ago, which observations I have myself verified and am prepared to verify. But these are quite different from those found in thrombi or, if preferred "emboli." They are loose, white, opaque, rough, flat, of sensible diameter, and arranged, not in rectilinear lines but in skeins curled up like a housewife's mat or a sailor's fancy coil of rope. They appear like filaments of albumen coagulated by some mineral acid. They are readily found in old rheumatic cases, especially when cardiac complication is present. They have also been discovered by Dr. Salisbury and demonstrated by him to me, in the blood of persons living exclusively or immoderately upon certain articles of food, as strawberries.

Now, calling the state in which clots are found in the heart or blood vessels, embolism, the concretions being so large as to be visible to the naked eye and to block up mechanically the caliber of the blood channels, if these emboli can be detected before the occurrence of embolism, we shall be able to detect a pre-embolic state with thrombi so minute as to be recognizable only by microscopic examination of the blood.

This is what Dr. Salisbury has done; and he states that he has found these clots in the morphological elements of the blood a long time previous to the plugging of blood vessels.

The treatment he directs is restorative to what he calls the "parent glands," and causes them to organize their products more

perfectly. This is largely effected by regulating the alimentation. The micrography of the blood tells how the general condition improves.

Remarks: Notice that it is not here intended to teach that in all cases this pre-embolic state occurs, but that in all cases examined in the pre-embolic stage he has found the minute thrombi. I also have found them. It is quite another thing to say that they will always be found by other observers. I am not aware of any mention of this fact or of its use in medical practice save by the discoverer and his pupils.

Properly speaking an embolus is a clot that acts as a plug. Thrombi are clots that have not become emboli. I took my cue from Dr. Sullivan, and think no harm is done as long as the thing intended is understood. I close with a brief quotation from the *Microscopic Examination of Blood*, by *J. M. Salisbury*, M. D., New York, Moorhead, Bond & Co., 1868, page 22:

"Whenever there exists in the blood, abnormal bodies that are insoluble in the serum, more or less irritation of the lining tissue of the blood apparatus, especially in the heart and vicinity, is the result. Sooner or later, the organic muscular fibers lose a part of their tonicity, and there are frequently tired feelings, and wandering pains and aches, which are more likely to hang about the cardiac region than elsewhere. The insoluble matters floating in the blood have a tendency to fix themselves in or near the heart, to the epithelial lining, the secretions from which assume a more or less plastic and sticky condition from the irritation excited. These fixed particles become centers for the gradual accretion of fibrin, which applies itself slowly, layer upon layer, and finally little by little we have formed thrombi. These from time to time break loose from their points of attachment and float in the blood stream as emboli. There is another condition of the blood elements where there is great danger of thrombosis and embolism, and which may be readily diagnosticated by means of the microscope, in time to avert the serious results which may await the patient. *This is stickiness and plasticity of the fibrin filaments* and colorless corpuscles. This stickiness often extends to the blood discs. Whenever this state is present the colorless globules are found—instead of being scattered about singly—

sticking to each other in groups of two, three, four or more. The fibrin filaments are also sticky and plastic, and impede the free flow of the blood cells through their net-work. The result is a marked tendency to the formation of thrombi and emboli. Emboli under such conditions are produced frequently, simply by the sticking together of the colorless corpuscles, forming masses of greater or less size. They are also formed by the breaking loose of thrombi. This sticky state of the blood is usually scorbutic, arising mainly from deranged or defective alimentation."

20 TREMONT TEMPLE, Boston, Dec. 21st, 1878.

FISH-BONES IN THE PHARYNX.—When a fish-bone gets lodged in the throat, Prof. Voltolini thinks the worst thing a physician unpracticed with the laryngoscope can do is, to try to push the foreign body down into the stomach. This manœuvre never succeeds, but simply wedges the bone tightly in between the folds of the mucous membrane. Voltolini, therefore, suggests under such circumstances to let the fish-bone alone until a physician be found able to extract it, under guidance of the throat mirror. But, in the meantime, he advises the use of diluted hydrochloric acid as a gargle. He found, in a solution of 4.0 hydrochloric, or nitric acid, 1 to 240.0 water, the hardest fish-bones become soft and flexible in one hour, thinner bones were like threads after one half hour. And he thinks the continued gargling with the above mixture (the teeth being protected by oil or lard) will have the same effect upon a fish-bone lodged in the pharynx.—(Monatsschrift f. Ohrenheilk.)

THE office of the Illinois State Board of Health has been removed to the State House in Springfield. All communications should be addressed to Dr. A. L. Clark, Secretary of the Board, Springfield, Ill.

Clinical Reports.

Article VI.

Illinois Charitable Eye and Ear Infirmary. Cases presented at Dr. Jones' clinic, and reported by F. C. Schaefer, M. D., Assistant Aural Surgeon.

Eczema of Left Auricle and Auditory Canal.

This child, Mary W., aged 6 years, has an eruption located chiefly in the meatus externus of the left ear, which is exceedingly painful to the touch. It presents the appearance of a crusted skin weeping a yellowish fluid, and gives rise to more or less pruritus. The eruption has probably existed several months; no accurate history can be obtained regarding it. This disease is known as eczema madidans, here in the sub-acute stage.

Eczema appears in the acute, sub-acute and chronic forms. The acute is the most common, and occurs usually in poorly fed female children, and in those who have inherited a strumous diathesis. It is sometimes brought on in children by uncleanliness or by their picking the ears. Occasionally the disease is met with in the adult, resulting from the application of irritating substances to the part. This pathological condition may be idiopathic, or may occur in the auricle by reason of its contiguity to the disease in adjacent parts. In this case we find it invading the auditory canal, encroaching slightly upon the auricle.

Eczematous eruptions, as you are aware, are, by some, classed among vesicular skin diseases. They usually appear first in the form of vesicles, but in many instances, especially about the ears, the vesicles coalesce at their circumference; their liquid contents, at first clear, become semi-purulent, and exuding from the vesicles dry into a scab.

The treatment varies with the stage of the affection. In the acute form sedatives to the part are indicated. Burnett and Roosa use for local application :

Flor. zinci	8
Alum pulv	30
Amyli pulv	30

The powder is to be dusted thoroughly over the diseased part.

Should there be a burning sensation present, with tendency to inflammation, astringent lotions may be used, the eruption to be disturbed as little as is consistent with effectual treatment. The air to be excluded as much as possible.

The sub-acute stage calls for about the same treatment, with the addition of moderate stimulation with benzoated oxide of zinc ointment.

In the chronic form, emollients are useful to soften the scales, and more stimulating applications are recommended, as the citrin with zinc ointments, and such others as may suggest themselves to your minds. Should the patient present a cachectic physiognomy, constitutional treatment will aid in the result. Cod liver oil and various ferruginous preparations are very serviceable in some cases, and Fowler's solution in others. Cleanliness always plays an important factor. You will however be governed in your therapeutic measures by the individual case.

Probable Syphilitic Gumma in the External Auditory Canal.

Miss S., aged 24. The external auditory meatus presents a conical tumor about 3 Mm. in height and 2½ Mm. wide at its base, on the posterior wall of inner third of the canal. The tumor has been present a number of months. Upon first examination several weeks ago, it seemed like an exostosis, but during the last few days it has become considerably inflamed and softened, and is now quite tender. The patient is inclined to resist the touch of a probe. You also notice in front of the tragus an indurated excrescence which seems to be cartilaginous ; this appeared more recently and has developed rapidly. Exostoses are usually not painful, and therefore this tumor may be regarded as doubtful and somewhat suspicious. The patient gives no specific history, yet the growths are indicative of syphilis, doubtless inherited,

and it will be well to place her upon tonic and alterative treatment, with the expectation of causing the tumors to disappear.

Iodide of potassium and tinct. cinchona were prescribed.

Impacted Cerumen and Polypus in the External Meatus of one Ear, with Inflammation of both Tympana.

Attention was called to Miss M., aged 20. The patient said her hearing had been defective for several years. Has more or less tinnitus aurium now. States that the right ear only is affected. Examination with the otoscope reveals a milky, turbid appearance of the membrana tympani, indicative of a thickening of the part due to an inflammatory process. The triangular light spot present in the healthy membrane is here absent, because the thickening has changed its angle with the external auditory canal, and its turbidity has diminished its reflecting power.

The patient has a peculiar intonation of the voice in talking; she speaks in a high key. This condition of the voice would of itself indicate to an otologist that there is a defect in the auditory apparatus, which has lasted a long time. This manner of talking suggests to us that the other ear is also involved. We shall see. When a watch is placed a few centimeters from the ear she can not hear it. If you now look through the otoscope, you will see a dark, dry substance, with spots like flakes of bran — dry, epithelial scales scattered over its surface. This mass is impacted cerumen and desquamated skin; (the impacted mass is removed). You see, gentlemen, we have here a hard substance the size of a bean; so hard that the instrument elicits a grating sound as we rub it. The usual procedure for removing these accumulations is to syringe the ear with alkaline water. By repeated syringings the mass is softened and finally washed out, but as we wished to examine this case further to-day, a quicker method was resorted to, which, as you saw, consisted in lubricating the meatus with vaseline and seizing the cerumen with the angular forceps, extracting it by a gentle, vibratory motion. (Introduces otoscope.) We now detect upon the posterior wall of the auditory canal, not far from the membrana tympani, a red projection, presenting a raspberry-like appearance, forming a half sphere, having no pedicle; this is a polypus, a result of suppurative inflammation

of the tympanum. I shall now proceed to remove it with these forceps. There, the greater part has been extracted. What remains forms an irregular surface. To remove this, chlor-acetic acid will be applied. The patient winces under the treatment. The application of caustics is of course painful. Chlor-acetic acid is used because it can be better controlled than nitric acid; it does not manifest the same disposition to spread, and its caustic property is destroyed by diluting it with water, thus stopping its action. A view of the membrana tympani can now be obtained, and reveals the fact that it is even more opaque than the other, presenting a slight perforation near its base.

This case is instructive in that it should teach you the necessity of following up the objective as well as the subjective symptoms, and shows that although there may be present in the meatus a hard, dry accumulation, a granulating surface beneath it, may be found after removing what has practically become a foreign substance.

Mastoid Periostitis, Suppuration.—Eczema.

This little girl, less than two years of age, was brought here two days ago suffering with periostitis extending from the mastoid process upwards and forwards until the swelling has reached the superior border of the external auditory meatus. As the inflammation was of a suppurative character, poulticing was advised, and to-day we detect fluctuation. It will be necessary to cut deep, and to make a free opening. Observe how the introduction of the lancet to the bone above the auricle is followed by the escape of pus. There is evidently a sinus extending in the direction of the mastoid process. The poultices should be applied several days longer. You see the strumous diathesis in this child. Such children are subject to enlargements of the glands and periosteal inflammations. Frequently eczematous eruptions are found upon the skin, as here manifested, over the opposite ear.

Chronic Non-Suppurative Inflammation of Both Tympana, with Calcareous Deposit in the Membrana Tympani.

Mr. B., æt 57, entered the infirmary May 11, 1878; hearing had been more or less defective for three years, supervening upon catarrhal inflammation of the pharynx; he had tinnitus aurium

in both ears. At the present time there is no tinnitus, and his hearing is almost perfect. The professor introducing the otoscope invited the gentlemen present to look at the membrana tympani, saying the membrane presents almost a normal appearance with reference to its transparency. The triangular light spot is distinctly visible in the lower anterior quadrant, indicating that the membrane is but slightly thickened by the product of inflammation.

Changing the position of the otoscope you now see a peculiarly opaque, white spot, near the upper border of the drumhead, somewhat papular in appearance; this is a calcareous deposit, a not infrequent accompaniment of old age. It does not necessarily compromise the function of hearing. It is desirable that every member of the class should see the membrane in this case, in order that he may recognize the difference between healthy and diseased membranes of the drum as they come under notice, for it is essential to know, first—*what to look for*, and second—to *interpret what is seen.*

The triangular light spot is the first landmark, so to speak, that is looked for in examinations of this part. This triangle, or pyramid of light, in the lower anterior quadrant of the membrana tympani, is always present when the membrane is in a healthy state; so you see it is very important that you should recognize it when present, and the condition of the parts in its absence. The light spot is produced by a combination of three causes:

First. The lustrous epithelium of the healthy membrane, making it a good reflector.

Second. The peculiar angle formed by the junction of the membrane with the external auditory canal, and

Third. The funnel-shape of the membrana tympani.

Any deviation from the natural brilliancy of the membrane indicates a departure from the healthy condition.

NOTES FROM PRIVATE PRACTICE.

ARTICLE VII.

Diphtheria.—Thermic Fever.—Œsophageal Stricture.

1. During the late autumn, fourteen children have died of

diphtheria in a locality about fifteen miles southeast of Gardner, Ill. In one family, three of four children died. In another of six, three died. In another of seven, six died.

2. One evening during the heated term of last summer, I was called to attend a lady 80 years old. The son reported that after visiting the orchard, she was seen to stagger, and was helped into the house. She joined the rest of the family at supper, and was seen to eat a little, but seemed unconscious of what she was doing. After supper, she started to reach a door, fell to the ground, and was picked up completely unconscious. I found her in a comatose condition, with stertorus breathing, pulse 140, temperature 108°. Dr. Taxis being summond to my aid, we applied ice to the head and administered Norwood's tincture of veratrum virida. She remained totally unconscious for thirty-six hours; then rallied, and was soon as well as before.

3. Mr. Thompson, a native of Ireland, came to this country when 25 years of age. At this time he swallowed, by mistake, a corrosive acid, which produced great soreness of the mouth and throat, and resulted in œsophageal stricture. Being unable to swallow solid food, and being also fond of milk and cake, he made that his exclusive diet.

When I first saw him, he told me he had lived on this cake and milk for about 55 years. His story was corroborated by his wife and daughter, and I have no doubt of its truthfulness. I was their family physician for a number of years. His wife told me she made his cake very sweet and short; he dissolved it in his milk, and had eaten this only for more than half a century. He could not and did not swallow anything as large as an apple-seed after his injury. He was a farmer, and up to within a few years of his death was able to perform laborious farm work.

This man lived to a ripe old age—something over four score years. The extreme contraction of the œsophagus, the exclusiveness of the diet, his ability to perform hard labor, with his long lease of life, are noteworthy facts.

C. M. EASTON.

GARDNER, ILL.

Society Reports.

ARTICLE VIII.

CHICAGO MEDICAL SOCIETY.

Reported for the JOURNAL AND EXAMINER, by DR. ROSWELL PARK.

At a meeting held Dec. 16, 1878, Dr. John Bartlett read a paper on Placenta Prævia, suggesting an original method of treatment, a full abstract of which we present:

DR. BARTLETT introduced the subject matter of his paper, by a reference to the several plans for the management of placenta prævia commonly in vogue. He then proceeded to state the objections to these methods, quoting Lee and Simpson, as declaring the tampon an uncertain and treacherous aid, and adding: "It is quite possible, that, by damming up the blood, the tampon subjects the surface of the placenta to the hydraulic pressure of the mother's circulation with the result of separating it from the uterus too early, or to an unnecessary extent." In one case, Dr. Bartlett thought he had observed the prolonged use of the plug to lead to putrefaction of the retained blood and consequent septicæmia. It was a serious objection to the tampon that, when its removal for any reason became necessary, from the moment of its disturbance to the secure adjustment of the new plug, a greater or less loss of blood occurred.

In reference to the use of Barnes' dilators, for arresting bleeding, and dilating the os, he said: "They tend to expand in the direction of least resistance, and may thrust the placenta off from the cervix to a greater extent than may be necessary." In regard to the puncture of the membranes and the use of ergot, Dr. B. objected that the loss of the liquor amnii and the ergotic

contraction of the uterus, in case necessity arose for changing the position of the child, render turning difficult and may cause a delay injurious or even fatal to mother or child.

Dr. Bartlett having quoted from the summary given by Dr. Barnes in his "Obstetric Operations," passages having a bearing on the matter of his paper, said: "I conceive that Dr. Barnes is correct as to there being a period or stage when the flooding is spontaneously arrested, at least to a very considerable extent," but his view as to the cause of this arrest differed greatly from that of Dr. Barnes, who says, "when the dilatation has reached the stage at which the head can pass, the intermitting active uterine contractions arrest the hæmorrhage." Dr. Bartlett referred the arrest of bleeding mainly to the altered relation between the uterine vessels and the uterine tissue, through which they pass, brought about by the change undergone in the cervix from the state of contraction to that of more or less dilatation, a change not to be described as one of "contraction," "retraction," or "dilatation," but rather as a kind of stretching. "Were we able," he said, "to pierce this thick rubber band with hollow tubes, here represented by threads extending from edge to edge, it is plain that while it is as now unexpanded, unstretched, the flow of a fluid through the tubes would be easy and unchecked, but were I then to draw upon the band in this manner (stretching it) so as largely to increase its diameter, it can readily be conceived that vessels passing through its substance would be compressed, and the passage of fluid through them greatly retarded or arrested. It is thus, I think, by that active change in the os uteri, so resembling stretching, termed dilatation, that the vessels within it are impinged upon, and bleeding checked."

Dr. Bartlett continued: "It would appear then that in placenta prævia, hæmorrhage is liable to occur until the cervix uteri is fully dilated; that when that occurs, at least in actual practice, where the head or body of the child presses into, or is drawn into the cervix, bleeding ceases. That to await this dilatation, even when the tampon is used, is dangerous; that dilatation is delayed by the attachment of the placenta to the cervix, acting in some degree as an unyielding splint upon it, and that the loosening of the splint, the artificial detachment of the placenta, is a step

gained toward dilatation; that while this separation of the placenta over the cervix is desirable, it is important that it should occur to the degree necessary for the dilatation of the os only, inasmuch as the breathing space of the child is lessened, and the prospect of its being born alive is diminished in exact ratio to the extent of placental detachment."

As an improved method of effecting dilatation, Dr. Bartlett proposed the following plan:

"Perforate the presenting placenta by means of an instrument carried upon the last joint of the index finger, resembling a tailor's thimble, provided with a serrated margin resting upon and extending slightly beyond the finger-nail. Perforation having been effected, the opening made is closed by the point of a finger until by means of the left hand a Hobb's dilator, shaped like a truncated cone, with the base upwards, and having a diameter when expanded as great as that of the hand, is slipped into the perforation. Hobb's dilators consist of the usual arrangement of tubes and rubber bags with this additional device—they are covered with a sack of stout silk of any shape desired, with the effect of causing them, when once pinched into a strictured orifice to continue to distend it with gentle force, till the contraction shall be thoroughly dilated, and this, without danger of over-expansion of the parts of the sack above or below the stricture. They are, because of the thinness of their walls, capable of being introduced into narrow appertures, and they may be provided with an index by means of which the moment of their complete dilatation may be known. Such a dilator, being passed through the perforation in the placenta, is quickly expanded so as to bear upon the margin of the opening with the view of preventing the escape of liquor amnii and of arresting bleeding from the placental vessels. Then by gentle hydrostatic pressure, the os uteri, and with it the opening through the placenta, is dilated to a size sufficient to readily admit the hand, slight traction being made meanwhile on the staff of the dilator so as to secure the pressure of the placenta against the cervix with the view of limiting detatchment as far as practicable, and at the same time of arresting hæmorrhage from the fœtal and uterine vessels alike.

Dilatation being fully effected, as indicated by the register, the

operator diminishes the tension of the dilator by lowering the fountain of water, so that the hand may be easily insinuated between the bag (its contents regurgitating under the pressure) and the apposed margins of the cervix and placenta.

The hand is introduced, the dilator being withdrawn, so soon as the arm is felt to fill the os, the feet brought down and delivery effected as promptly as practicable.

By this method, Dr. Bartlett believed, the principle of the tampon would be applied with the greatest certainty and efficiency—that advantage is gained by introducing the plug once for all, no removals or changes being required in the process of dilatation. He thought the tampon would act in such a manner that instead of tending to separate to an unnecessary and undesirable extent, the placenta from the cervix, it would, on the contrary retain parts of it in apposition and in vital connection, which would by other procedures be separated.

The shape of the tampon and its position relatively to the placenta and cervix would tend to crowd these structures together in such manner as to prevent to the greatest possible extent bleeding from either.

The peculiarity of the dilator in expanding to a size definite and known and in automatically indicating when complete expansion was reached, enabled the practitioner to proceed to introduce the hand without fear of using violence and to turn, the liquor amnii being preserved, with ease, and without undue apprehension lest a dangerous delay result from an insufficient opening in the placenta or an inadequate dilatation of the os.

It has been objected to this method that perforation of the placenta, early suggested, has been abandoned because it is difficult of execution, because the insufficient opening in the placenta is sometimes an obstruction to delivery, and finally, that it is dangerous to the child in consequence of the wounding of the placental and uterine vessels.

The first objections do not apply to this plan, and in regard to the last it may be said that though the perforation of the afterbirth is generally condemned by writers, there are yet quite an array of authors who have found reason to recommend it." Here the essayist recited a list of names, concluding with those of

Denman, Blundell, Bard and Bedford. It was quite possible that in placenta prævia centralis perforation of the after-birth would involve wounding the largest placental vessels. The writer had no disposition to ignore this objection, but from certain *a priori* physiological reasons, he was of the opinion that the implantation of the cord at the point in the placenta corresponding to the os uteri would prove to be a rare occurrence.

The Doctor concluded by citing a fact which he regarded as rather interesting, analogically, than actually bearing upon the plan of treatment proposed, namely, that in the ungulates, as the mare and the sow, which have what the comparative anatomists denominate a *diffuse* placenta, an enclosed sac of umbilical vessels entirely surrounding the young, perforation of the placenta is essential to birth.

DISCUSSION.

At the conclusion of the paper, discussion being invited, Prof. Fitch commended the idea as being ingenious and possibly the best plan yet devised. But he feared that separation would be rather favored. When bleeding had occurred there must be more or less separation, and what was to become of the ruptured vessels? Would not the danger of uterine hæmorrhage be increased?

DR. HARCOURT inquired if Dr. Bartlett proposed to limit the plan proposed to the management of placenta prævia centralis? In case of lateral presentation, could the method suggested be depended upon for arresting the bleeding of placental vessels torn in slitting the placental edge?

DR. PAOLI held that no positive rule could be laid down for general adoption. He preferred the tampon to an entirely new method. He had six cases, in three of which, by aid of the tampon, he had succeeded.

DR. SAWYER thought it difficult to know what instructions to give a class when doctors thus disagreed. He considered it better

NOTE.—Dr. Bartlett suggested to the reporter that an instrument for perforating the placenta could be extemporized from a large thimble, by partially detaching its top from the conical portion by filing around about two thirds of its circumference, and thrusting it outward so that it stand in a plane parallel to the axis of the thimble. This portion being filed smaller and serrated on the edge, the instrument was ready for use. Muscular tissue and even thin board can be readily cut through by repeated sawing movement of the index finger armed with this device. A large sized Barnes' Dilator or a pig's bladder could be substituted for Hobb's Dilator.

for younger practitioners and students to have some precise idea of what should be done in such cases. If they were to go on the general rule of "using their own judgment," he feared they would lose every case. In seven years' practice he had had three cases; two of them complete or central, both of which he lost. His first case died of syncope from a rupture of the cervix and uterine tissue, as proved by autopsy. The site of placental adhesion was as rotten as wet paper. He thought the descent of the head, or, possibly, the introduction of the hand, thus ruptured it. His first case also had some laceration and died of puerperal septicæmia and mania. His method was to use the tampon. He felt sure that the hæmorrhage is largely from the placental as well as the uterine tissue; also that if he had perforated the centre of the presenting surface, he would have wounded the largest placental vessels, instead of avoiding them, as Dr. Bartlett thought might be the case. His autopsy had taught him that. He thought there was little comparison between the gravity of a partial and a central implantation. As a general instruction he would say "plug, and either turn or use the forceps."

The President, DR. INGALS, thought that the mere presence of clot partially or wholly filling the vagina might be made a sufficient tampon and thus serve a good purpose.

DR. BARTLETT replied: To the one or two members who would seem disposed to repudiate predetermined action in the management of placenta prævia, and even to discard "anything new," suggested for its treatment, he would simply cite the language of Dr. Simpson in his remarks prefatory to his paper "On the Spontaneous Expulsion and Artificial Extraction of the Placenta before the Child": "Mothers who are the subjects of placental presentations are submitted to as great peril of life from this obstetric complication, as they would be if seized with yellow fever or the cholera. Looking at these results, it will, we believe, be readily conceded that any attempt to diminish this fearful maternal mortality in placenta prævia is entitled, at least, to the consideration of the obstetric profession." In reply to Dr. Fitch's question, he would repeat the opinion expressed in a portion of the paper read, he believed, when Dr. Fitch was out of the room; that the pressure of the tampon from above downward,

crowding together the apposed surfaces of the placenta and uterus, would prove the surest method of either preventing or arresting hæmorrhage. In answer to Dr. Harcourt, he stated that the method was intended for central, lateral, and so far as the use of the peculiar dilator was concerned, incomplete implantations of placenta prævia. A distinguished obstetrician, of this city, had, in conversation, put the same question as Dr. Harcourt had advanced; he believed that the tampon used as advised would be as likely to control bleeding under these circumstances as any other means, but a satisfactory answer to the Doctor's question, could be given only after trial. Dr. Sawyer's case, where he found the origin of the cord corresponding exactly with the os uteri would seem to contravene the theory advanced in the paper as to the improbability of such an occurrence. In reply to the question of the President, whether he had tried the plan suggested, Dr. Bartlett stated that he had not; that the method had occurred to him within a few months.

During the evening the following interesting facts were stated: Dr. C. T. Parkes' *first* labor case was one of placenta prævia; while Dr. Fitch had but *two* cases in twenty-seven years practice, Dr. Mary Thompson had seen two cases, on adjoining beds, in the same hospital ward within a single week.

ARTICLE IX.

CHICAGO MEDICAL SOCIETY. REGULAR MEETING, JAN. 20. Reported by R. PARK, M. D.

DR. W. H. BYFORD repeated most of a clinical lecture (which is printed in this number of the JOURNAL AND EXAMINER) on "Puerperal Vaginitis, as a Cause of Vesico-vaginal Fistula."

In the discussion which followed, Dr. Dudley said he had seen cases, and made autopsies, where urine passed through fistulæ which were so small or contracted that they escaped detection. The plan of closing the vulva when most of the posterior wall of the bladder was gone, or when the fistula was too large to be closed, seemed to him an excellent one, inasmuch as a large receptacle was thus formed for urine.

DR. RARTLETT said he had once attended a woman in labor who had a prolapsus of the bladder. He introduced a flexible catheter, evacuated and replaced the viscus, and delivered her naturally and safely. He afterwards learned that she had suffered from cystocele for several years.

DR. FLOOD thought that forceps themselves might cause injury which would lead to fistula in a more direct way than by causing puerperal vaginitis.

DR. INGALS asked Dr. Byford whether the danger was great when the pressure, caused by the child's head, was severe, though of short duration.

In closing the discussion Dr. Byford claimed that the pressure of the head on the soft parts did not cause nearly as much damage *directly* as did the inflammation thus *indirectly* excited. Not enough attention had been directed to this point. Treatment *after* labor was much more frequently at fault than treatment *during* labor. He had labored hard to make this matter better and more generally understood. In answer to Dr. Flood's question, he thought it next to impossible, under natural conditions, to rupture the bladder. The vaginal walls were tightly stretched about the head, and were very strong, and he could hardly conceive how the walls could be caught. But, of course, an ignoramus could produce almost any injury—even punching a hole through the bladder. He had once cured a case of fistula, and was subsequently called to attend the same woman in labor. He delivered with forceps, knowing full well the danger, and was unable to prevent a fresh laceration and rupture of the septum. But he had the satisfaction of saving the child and afterwards of again curing the mother. To Dr. Ingals' question, he replied that prolonged pressure might cause danger. He thought that when the head seemed impacted and neither advanced nor receded, forceps should be used. He had seen one case where a severe laceration or rupture had been produced by the bungling use of the perforator.

As germane to the subject, Dr. Etheridge exhibited a Smith's cleft-palate needle, of English make, which he considered equally well adapted for closing fistulæ. A hollow needle was employed and the suture wire passed through it.

DR. BYFORD exhibited a tumor nucleated from the vesico-vaginal septum, by the descent of the fœtal head. The tumor had bony walls of true cancellous tissue, and on opening it there were found hair, irregular, small bones, and sebaceous matter. Its longest diameter was about 10 cm. He considered it a dermoid cyst which had developed in the anterior vaginal wall.

DR. C. T. FENN reported the autopsy of a case of gall stone, which caused an abscess, with destructive changes in the vicinity of the gall bladder; the abscess finally breaking into the pylorus.

DR. HAYES also showed a large gall stone, weighing 15-6 grams, taken from a patient that died of shock following ovariotomy. She had never complained of anything to excite suspicion more than pain in her right side.

ARTICLE X.

TRANSACTIONS OF THE CHICAGO GYNÆCOLOGICAL SOCIETY. Third Meeting, December 27th, 1878. D. T. NELSON, M.D., in the chair.

DR. E. O. F. ROLER read a paper upon placenta prævia, with the report of a fatal case (published in the present number of the JOURNAL AND EXAMINER).

DR. W. H. BYFORD: The subject of placenta prævia is one of great interest to every practitioner of midwifery, and our knowledge in reference to its management must be correct and immediately available to be of use to the patient. Dr. Roler's paper is commendable for its candor, research and the tone of positive convictions growing out of great experience. Not the least valuable feature of the paper is the clearness with which he has placed his conclusions before us. Remarks that might embrace all the points made by Dr. R., would not be desirable, so I will limit myself to such as I deem of most importance.

There is no doubt in my mind that the ovum may be fructified at any point during its transit, and form attachments to any part of the genital canal, from the distal extremity of the Fallopian tube to the cervical canal inclusive. Hence I should expect to

find the placental implantation in cases of prævia at, and partially encroaching upon, the internal os, covering it centrally, and in the cervical cavity. When we remember that the placenta can attach itself to serous membrane—as in ventral pregnancy—the nature of the mucous membrane of the cervix cannot be adduced as an argument of sufficient cogency to prove this impossible. As to the source of the hæmorrhage, I think the opinion expressed by the writer the most plausible. The causes of the separation of the placenta are to be found in the difference in the structure and mode of development of the cervix as compared with the body and fundus. The muscular fibers are larger and more numerous in the fundus and fundal portion of the body, than in the lower zone of the body, and very much more so than in the neck. In normal pregnancy, the development or growth of the fundus is more rapid and more extensive than any part of the body, and the upper part of the corpus more and earlier than the lower, while the cervix is developed last of all. Not only is this true, but the character of development is different in the cervix as compared with the fundus and body. The enlargement of the fundus and body, especially the upper portion, is one of true hypertrophy. All the tissues entering into the structure of these portions of the uterus are increased sufficiently to accommodate that portion of the ovum occupying them without distension. The enlargement of the cervical portion of the organ, however, is partly hypertrophy and partly distension, and, I believe, in a less degree this is true of the lower or cervical portion of the body. The distension of the part of the body near the neck begins in the latter part of the eighth month, and that of the cervix is accomplished for the most part during the ninth month. At any rate, we can satisfy ourselves by examination that it progresses very rapidly during the last month. When gestation is finished, the cervical portion is large enough to contain the head, and its walls are comparatively thin. With this understanding of the structure and mode of development, I am inclined to consider the fundus and body as the contracting parts of the organ, while the cervix is the dilating portion. Probably the implantation of the placenta over, or in the cervix—by virtue of the greater supply of blood to the placental site of the organ—may

to some extent modify the manner of development of the cervix, but it does not entirely do away with the manner of its enlargement. So soon, therefore, as the distension assumes its normal preponderance over the process of hypertrophy, the surfaces of attachment slide upon each other, a number of vessels are torn and hæmorrhage results. In central implantation this occurs early and becomes greater as the time for labor approaches. The treatment should begin at the time of the discovery of the condition, and be perseveringly continued until the cause is removed. It is the teaching of universal experience that a woman is in imminent danger every moment after hæmorrhage has begun. It is seldom that this symptom of placenta prævia shows itself before the fœtus is viable, and its safety depends upon a speedy release from its hazardous relation. Artificial premature delivery, according to the plan recommended and practiced by Greenhalgh, should be performed without hesitation, at the earliest practical moment after the diagnosis is clearly made out.

If our attention is not called to a case until labor has begun—and this will usually occur before term—energetic measures should be instituted, and the patient should not be left until delivery is completed, and the patient revived from the exhaustion usual in the most favorable cases. While I freely acknowledge that no one course of treatment will answer equally well in all cases, and that much must be left to the judgment of the immediate attendant, I believe we can settle upon a plan that will be generally applicable.

The principal means available at such times are the tampon to staunch the bleeding, ergot to promote the expulsion of the contents of the uterus, stimulants and nourishment to sustain the patient. If the hæmorrhage is not so urgent as to render it necessary to use the plug immediately, the evacuation of the liquor amnii will be of great service, not so much for the purpose of allowing the condensation of the uterine walls and construction of the vessels, as to stimulate the uterus to increased expulsive efforts. The evacuation of this fluid does, however, have an immediate effect in causing the presenting part to press upon the placenta and constricting the vessels by muscular contraction.

The tampon should be applied so as to perfectly prevent hæmorrhage. This can be done. I agree with Dr. Roler that cotton in pellets is the best material for the tampon. The pieces of cotton should be moistened with water and each one secured by twine, and the vagina packed so firmly that there is no room for the smallest stream of blood to escape. After the tampon is applied and the hæmorrhage is checked, it should be watched, and if necessary add to it and wait, not for an opportunity and sufficient dilatation to turn, but for the expulsion of the fœtus. While the tampon is being applied ergot ought to be given in full doses. By external examination the presentation can be ascertained, and corrected, and the uterus further stimulated and aided in its expulsive efforts by pressure with the hands upon the fundus and upper part of the body.

In some of these cases the after hæmorrhage is an item of great importance. When the implantation is central, or cervical, there is not sufficient contraction at the site of the attachment to entirely close the severed vessels; hence, although there may not be a large loss, there is a continued drain that may be enough to turn the scale against the already exsanguined patient. This may be materially lessened if not entirely checked by the direct application of astringents, or the hæmostatic preparations of iron. They may be applied by a large swab of cotton introduced up to the bleeding parts, and kept there until coagulation occurs, and then withdrawn. Of course the cautious practitioner will watch the uterus and promote its contraction by the usual means.

DR. MILLER said he fully agreed with the essayist regarding the cause of placenta prævia, viz., the ovum dropping in the cavity of the uterus till it is obstructed at the inferior segment, to which it becomes attached, and at that point the placenta is developed. The subject introduced this evening leads to the enquiry: What effect is produced in the uterus by pregnancy? Prominently the enlargement of the volume of the organ by increased nutrition. In normal pregnancy the development is manifested first in the fundus, and progresses downward till finally, in the last months of gestation, the cervix and os uteri are affected. Is the inferior portion enlarged by mechanical distension? He would associate with the theory of stretching, the

idea of tension, then as a consequence, would not the tissue become firm and more resisting? We observe, however, that the tissue of the os and cervix becomes softer and more relaxed as term approaches. When the os uteri is felt hard and resisting, some pathological condition would explain it, in the supposed case.

In placenta prævia, the os and cervix are not thin, but much thicker than in normal pregnancy, in obedience to the law that the portion of the uterus to which the placenta is attached, is increased by more active nutrition, enlargement of vessels, sinuses, etc.

He inclines to the theory that the hæmorrhage in placenta prævia is due to vital action in the tissue of the uterus. The placenta is passive, the uterus is active. The placenta is developed by the end of the fourth month. No new elements enter into its composition after this period. The chorion villi have disappeared. After this period of gestation, the cervical zone of the uterus is developed; it is enlarged, by a process of growth, beyond the enlargement of the placenta; as a consequence, the attachment at and near the os uteri becomes so feeble that the weight and current of blood in the vessels and sinuses of the parts involved, rupture the feeble connection, and hæmorrhage follows. The hæmorrhage is "*unavoidable.*"

In regard to treatment, the suggestion made by Greenhalgh: that labor should be induced when the fœtus has attained viability, is worthy of consideration, and adoption. The dangerous hæmorrhage usually takes place after the seventh month. After this period, the uterus may be excited to action, while the attendant is present to observe the progress of the labor, and render assistance at the moment it may be required, and thus he may preserve the life of the child, and save the mother.

If hæmorrhage commences before the fœtus has become viable, it may be checked by a properly applied tampon, by position of patient, and by other means. But when desirable to excite uterine contractions during the hæmorrhage, the os uteri should be *strongly* compressed, and the upper part of the vagina *greatly* distended by the tampon. When the contractions of the uterus have been established, their efficiency may be increased by evacuating the liquor amnii.

The reason why cases sometimes terminate favorably, without assistance, when the placenta has been completely separated spontaneously, is doubtless because from the first the uterus contracts with energy.

Barnes would lead us to believe that safety in placenta prævia depends upon the *practical* separation of the placenta. Is this true? The essayist has answered the question in the negative; and this is what should be expected. If the irritation attending the partial separation should excite the uterus to efficient contractions, it is conceivable that the presenting part might be forced against the separated portion of the placenta, and this against the open vessels and sinuses of the uterus, and thus hæmorrhage be stayed, but unfortunately for the theory involved, the uterus does not always thus respond.

The source of the hæmorrhage he believed to be both from the separated portion of the placenta, and from the uterine vessels.

In answer to the question as to what material he used for a tampon, Dr. Miller said a strip of cotton cloth like a common roller, one end of which was introduced and the remainder carried up till the vagina was sufficiently filled. He had used sponges, but they were not always to be had at the time they were needed.

DR. CRAWFORD, of Monmouth, Ill., who was present by invitation, expressed his interest in the subject under discussion, and inquired how early in pregnancy a placenta prævia could make itself known. He narrated a case under his observation of a woman who suffered a violent hæmorrhage at the fifth month. By plugging the loss was arrested. The hæmorrhage recurred, however, at the sixth and seventh months, and during labor. The plugging was repeated each time, and the woman and child survived the labor. In answer to a question, Dr. Crawford said that his was a case of partial placenta prævia.

DR. DUDLEY: Previous to the year 1672, I believe, there is no record that any man recognized placenta prævia. Cases of dangerous flowing in puerperal women occurred, but no satisfactory reason was given. When the placenta was found at the os internum, it was supposed to have been detached from its normal position, and to have remained in its detached position.

In 1672 Paul Portal made investigations which resulted in the discovery of placenta prævia. I do not know that he suggested any very efficient means of treatment. His investigations passed out of mind and were lost. In the next century his discovery was independently re-discovered by several eminent obstetricians. They, in their turn, so far as I know, made no valuable suggestions of treatment. Forty years ago nothing was known of placenta prævia more than Portal knew in 1672.

Within forty years valuable additions to the means of treatment have been made, and among them is the tampon, introduced one hundred years ago, by Leroux; the water bag; puncture of the membranes, and detachment of the placenta. But even now, on the authority of Sir James Simpson, the mortality in placenta prævia is frightful. His statistics show that about one-third of all the mothers die, and about one-half of the children. We are, therefore, far from the position where we may rest and call the work done.

The practice of delivering prematurely, mentioned by Drs. Byford and Miller, was first described by Greenhalgh, of London, in 1866, but from the comments then made upon his pamphlet, it was evident that this practice was not uncommon among the leading obstetricians in Great Britain.

In 1868, Thomas, of New York, published several cases. Then supposing himself to be the pioneer in this treatment, and not knowing that Greenhalgh had anticipated him.

The reasons for premature delivery, *i. e.* delivery two months before term, are so obvious that it is remarkable that it was not thought of earlier, and much more remarkable that the practice is not more commonly employed. The question on the part of the mother is, shall we deliver at eight months before she has become exsanguined from loss of much blood, when we may be present during the entire progress of labor prepared to meet any emergency, or shall we wait until term, with the possible chance that death from sudden hæmorrhage may occur at any time and before aid can be called, and then deliver when the patient has become exhausted from repeated hæmorrhages and constant anxiety. But the question on the child's part is, does he have a better prospect at eight months out of the uterus, dependent upon

pulmonary respiration, or shall he remain in the uterus, dependent upon placental aëration, which must necessarily be impaired proportionately to the amount of hæmorrhage, and then be subject to all the danger of perhaps a powerless labor in placenta prævia.

Dr. Thomas reports eleven cases treated by premature delivery, and of these only one mother was lost, and she died of puerperal septicæmia. Three of the children were still born; all of the remaining eight did well but one, who died in a few hours after delivery.

This gives Dr. Thomas in his eleven cases a percentage of about thirty-six deaths on the part of children, and a percentage of about nine on the part of mothers,—a vast improvement upon the statistics of Simpson. In all obstetric operations requiring a speculum, I am satisfied that Sims' is more applicable than any other, and should be more generally used. There is no doubt but that the tampon may be applied more efficiently through Sims' speculum than by any other means.

After introducing the speculum, pack as much cotton as possible around the cervix, distending the vaginal cul-de-sac to its uttermost, then partially withdraw the speculum and again introduce its blade in front of the cotton, and by making pressure backwards with the speculum you will have almost as much room for packing the cotton as before any was put in. The speculum may be thus withdrawn and re-introduced until the vagina is full. The amount of cotton possible to introduce in this manner, and therefore the amount of pressure about a bleeding uterus is really remarkable. Let me repeat that so valuable an instrument as Sims' speculum ought to have more general use in obstetrical operations.

DR. SAWYER: There are two points in connection with the subject before the society upon which I desire to speak.

First, I would ask if there is any evidence that an ovum once entirely or partially separated from its usual site near the fundus can form new attachments in the lowest zone?

This question is suggested by the history of a case under my observation, of a lady who, finding herself pregnant much against her wishes, made many efforts to rid herself of the ovum.

Among other measures, she described how she attempted to pass a male elastic catheter into her uterus, at least a dozen times during the first three months of pregnancy. Near her term I was first called to her on account of an alarming hæmorrhage, at midnight. I discovered a presentation of the placenta, and learned the history already narrated. She seemed anxious to confess to me, and demanded to know if her criminal attempts would explain the hæmorrhage, which was something that never happened in her previous pregnancies. A few weeks later, the unfortunate lady fell in labor and lost her life. An examination of the elliptical placenta revealed that its very center had been implanted over the internal os uteri. This fact was shown by an area of smooth fibrous-like tissue upon the uterine surface of the placenta, which apparently had formed no attachment with the uterine tissue.

The inquiry was raised: If this ovum was implanted over the internal os in the earliest days of pregnancy, would not the passage of the cathether have so disturbed its attachments that it would have been thrown off by the uterus? I know it will be offered that it is improbable that the catheter entered the uterus at all. But I am inclined to the belief that once, at least, the woman did traverse the ora, because the last effort, she told me, was followed by a profuse hæmorrhage, which so alarmed her that she was constrained to desist from further trials.

Is it unreasonable, I submit, that the ovum may have been dislodged from its usual site near the fundus by the instrument, say in three-fourths of its circumference, at an early period of gestation before the withering of the primitive villi, and have rolled down into the most dependent part of the uterine cavity, and there formed new attachments, while the remaining undetached villi were sufficient to insure the integrity of the ovum until the new attachments were completed?

Another point is one which I have never seen alluded to in the books, namely, the friability of the uterine tissue upon which the placenta is developed. In the case just referred to, the uterus was removed and examined immediately after death, and I was chagrined to find a tear which involved the entire thickness of the tissue proper of the uterus, but not the peritoneum, and

about four inches in length—the entire length of the elongated neck,—upon the right side, at the junction of the anterior and posterior walls.

It was easy to mark out the placental site, and the ease with which this part was torn in my hands compared with the tearing of tissue at the fundus was something striking.

In the labor I used no undue violence. I experienced no difficulty in introducing my hand through the ora, nor in performing version. The chin of the large child passed over the right side of the neck, and may have caused the rupture. It is proper to add there was a constant dribbling of blood after delivery, though the post-partum contractions were complete; and this loss may have somewhat increased the shock which destroyed the patient.

This case recalled another which was under my care three years before. The woman survived the first shock from a labor with complete placenta prævia, but developed, within the first forty-eight hours, an attack of pelvic cellulitis, confined to the right half of the pelvis. Puerperal mania supervened, and death occurred on the fourteenth day after delivery. In this case version was performed, and the chin of the child (the latter weighing thirteen and three-quarters pounds) passed over the right side of the cervix. I am not able to say that the uterine tissue in the latter case was torn; in fact the speculum was never used; but the very rapid development of the cellulitis has led me to think that there was some lesion as its point of origin.

In the light of this experience I would, in future cases, use extreme care in all procedures which would stretch the uterine tissue in the cervical zone, upon which the placenta is attached.

A peculiar state of the cervix early in the labor in one of my cases of placenta prævia, is of sufficient interest, I think, to be spoken of in this connection. Its form was that of an inverted funnel. The external os was fully three centimetres in diameter; the internal os, on the contrary, barely admitted the end of the index finger, which impinged against the placental tissue. The length of the cavity of the cervix was as great as in the unimpregnated state. This state of things existed at term, when labor had actually begun; it shows the conservatism of nature

in maintaining the spincter-function of the internal os, so that the placental attachment should not be disturbed until the external os was partly dilated. It also shows that the cavity of the cervix is not always merged into the cavity of the body of the uterus during the last days of pregnancy, as is usually held.

Finally, it has seemed to me that in point of grave significance the slight over-lapping of a flap of the placenta upon the cervical zone—and which is known by the ominous name of partial placenta prævia,—bears no comparison to a central implantation of the placenta.

Within a few weeks I have attended a labor, in which, during the very earliest moments of the first stage, there was an escape of blood, much more than what is known as the show, but not enough to occasion any alarm. The edge of the placenta was easily accessible upon the mother's left side. The pains were moderate, but soon the head fairly engaged, with the occiput posterior and to the woman's right side. The labor progressed and terminated favorably for both mother and child with absolutely no unusual interference.

DR. FITCH: I have but little to say upon this subject. I have enjoyed the paper and discussion, and feel better prepared to treat a case of placenta prævia than before.

My experience in this has been somewhat similar to that in puerperal inversion of the uterus. During my practice of 27 years, I have had but two or three cases, and none of them complete or central; not one of them requiring any special treatment.

Dr. John Bartlett read a paper on this subject, at the last regular meeting of the Chicago medical society. The plan of treatment suggested by him was to carry an instrument on the index finger, secured by a ring, into which the point of the finger passed; from this ring, and the point of the finger, extends a spear with serrated edges (if I understood him correctly), with which he pierces the placenta and then introduces through the opening thus made, a Hobbs' dilator, which, at the same time, acts as an efficient tampon and dilator. This device I think very ingenious, yet I am satisfied that the principal objection to this operation is that the complete separation of the placenta

from the uterus, by hydrostatic pressure would almost necessarily follow, and the consequent death of the fœtus.

With regard to the source of the blood in this hæmorrhage, I believe that Dr. McKinzie has demonstrated the fact on the bitch that the principal part of the blood, if not all, comes from uterine sinuses.

DR. JONES called to mind the advice of the venerable Dr. Jonathan Knight, of Connecticut, who proposed that alum in powder or in lump, be used at the commencement of every tampon, whether the hemorrhages were "accidental" or "unavoidable." His own experience substantiated Dr. Knight's confidence in its hæmostatic value.

DR. NELSON: It has been my fortune to escape from most of these cases of placenta prævia. I have had but one case myself, though I saw Dr. Roler's case as reported, two days before delivery, and I have always felt very uncomfortable about that case, especially after I learned the unfortunate result of it, fearing I did not do my whole duty. I believe when such a case is discovered, so near term as this was, it should never be left without a medical attendant ready to act when necessary; for usually the greatest danger is the loss of blood occurring before the arrival of the physician. Probably no other result could have been obtained in this case if the woman had had skilled attention constantly from the time I saw her till Dr. Roler was finally called.

As to the cause of these unfortunate cases, I wish to emphasize the diseased condition of the mucous membrane of the uterus, such that when the fecundated ovum reaches the interior of the uterus, the mucous membrane does not respond as it should to retain the ovum in its depressions at the fundus, but from its unnatural smoothness, and the quantity and quality of the secretions, the ovum glides down to the inner os, and there forms its attachments, producing a case of placenta prævia or perhaps, fortunately escapes from the cervix and is entirely lost.

The only case of placenta prævia I have had myself, and that only partial, was in a patient I had treated for several months for chronic metritis. Dr. Roler's patient, I understand, had also been treated for chronic inflammation previous to this preg-

nancy. One, at least, of Dr. Sawyer's cases had had a severe pelvic cellulitis, resulting in abscess, and was subsequently treated for chronic metritis and perimetritis, during the most of a year previous to her last pregnancy.

It may be said, if chronic inflammation of the uterus is the cause of placenta prævia, this accident should be much more frequent. I reply that, fortunately, if the fecundated ovum does not become attached at the fundus of the uterus, it is usually passed from the cervix entirely, and the woman does not become pregnant. In all the cases I have seen, I am very sure the placenta was implanted within and over the internal os, not upon the walls of the cervical canal.

ARTICLE XI.

WEST CHICAGO MEDICAL SOCIETY. REPORT ON CHEMISTRY.

Read to the Society by J. H. SALISBURY, M. D.

In this paper I shall not attempt to give an account of all the discoveries made during the year, but shall note only those which bear more or less directly on the practice of medicine.

The liquefaction of the gases is one of the most important discoveries made during the past year. The discovery was made almost simultaneously by Cailletet, of Paris, and by Pictet, of Geneva.

The method employed for oxygen is briefly as follows: Oxygen gas is generated in a closed retort until the pressure equals 320 atmospheres. This retort ends in a tube which is surrounded by another tube, in which a temperature of 140° C. is obtained by the evaporation of carbonic dioxide, under greatly diminished pressure.

When the pressure in the retort in which the oxygen is generated has reached 320 atmospheres, a stop-cock is opened and some of the gas is allowed to escape. One portion of the greatly condensed gas in expanding, abstracts sufficient heat from the rest, which is already greatly refrigerated, to reduce it to the liquid condition. The temperature of this liquid has been supposed to be absolute zero.

This discovery seems to confirm the position of hydrogen as a metal. Liquefied hydrogen is described as an opaque bluish liquid, which, in falling on the ground, produces a metalic ring.

Prof. Selmi obtained from the bodies of persons, who had died a natural death, several substances possessing the general characters of the alkaloids, and has found that they are derived from the spontaneous decomposition of the corpses. Some of these substances are fixed, others volatile; some soluble in ether, others insoluble in that medium, but soluble in amylic alcohol; others again insoluble in both these liquids. Generally the fixed cadaveric alkaloids yield a precipitate with almost all general re-agents. They yield color re-actions, which, however, are not produced in certain cases, according to the conditions of putrefaction.

These compounds are easily oxidized, and turn brown on exposure to the air, evolving a peculiar urinous odor; at other times the smell is like that of conia, and sometimes they exhale an odor like that of certain flowers. They generally possess a pungent taste, which benumbs the tongue. Sometimes the flavor is bitter.

Some of these compounds have no effect upon animal life, but others are powerfully poisonous. The symptoms produced by them are transient dilation of the pupils, slackening and irregularity in the pulsations of the heart, and convulsions. After death the heart is found contracted and void of blood.

Prof. Haines, of Chicago, discovered one of these alkaloids previously to Prof. Selmi, and described it in a paper read before the Chicago Chemical Society last winter. He found that it varied somewhat with the degree of decomposition. The alkaloid extracted by Dr. Haines was not poisonous.

It is important to bear in mind the occurrence of these substances, as otherwise an inexperienced analyst might be misled and suppose that he had found poison when he had not.

Some experiments of considerable interest to the medical profession were made by J. J. Coleman, of Glasgow, on "The digestive power of malt liquors."

Finding that during an illness he was greatly benefited by a liquid somewhat like ale, which he calls Hoff's liquid, and which

increased his digestive power for starchy food, he determined to examine it.

A certain amount of bread was digested in a given amount of Hoff's liquid, made slightly alkaline for from six to twenty-four hours. A blank experiment was carried on at the same time, in which the same amount of bread was digested in water made slightly alkaline.

Comparative experiments were made at the same time with different specimens of beer, ale, and porter. The average result of the experiments was as follows:

Burton ale, dissolved	15	per cent.	of	the	starch	in the bread.
Wrexam ale, dissolved	26	"	"	"	"	"
London porter, dissolved	40	"	"	"	"	"
Hoff's liquid	60	"	"	"	"	"

These experiments show a remarkable solvent power of malt liquors on starch. The author states that the dissolved solids partook more of a gummy than of a saccharine character.

The dissolving or digesting agent is not alcohol, for the stronger ales did not act so powerfully on starch as the weaker ones. Dr. Haines has repeated these experiments with American beers, and found the same digestive power, only in a lower degree. This he attributes to the poorer quality of the beer in America, as according to the admission of some Milwaukee brewers, corn and other grain is substituted for malt to a large extent.

Dyalized iron has been recently used as an antidote for arsenic.

For this purpose it possesses great advantages over ferric hydrate as it can be kept on hand while ferric hydrate must be recently prepared to act with efficiency. Dyalized iron requires to be mixed with some neutral salt before it can act efficiently as an antidote. This neutral salt is ordinarily furnished by the gastric juice, but lest for some reason the gastric juice should fail to furnish this necessary condition, the dyalized iron should be followed by a teaspoonful of common salt, mixed, if possible, with a little calcined magnesia, or other alkaline substance to neutralize the acid of the gastric juice.

A number of cases of arsenical poisoning which have been successfully treated by dyalized iron have been reported, thus confirming the results of experiment.

The presence of arsenic in the preparations of bismuth has excited some attention during the year. In some experiments made by the author and published in the June number of the JOURNAL AND EXAMINER, arsenic was found in thirteen out of eighteen specimens of the sub-nitrate of bismuth, the largest quantity being 1-5 of 1 per cent.

J. W. Underhill, M. D., relates a case, in the *Lancet and Clinic*, in which he gave sub-nitrate of bismuth to his child for eleven days, when the child began to show marked symptoms of arsenical poisoning. The sub-nitrate of bismuth was examined and found to contain 15-100 of 1 per cent. of arsenic. Another specimen showed the presence of 24-100 of 1 per cent.

These facts show that the administration of sub-nitrate of bismuth for a long time and in large doses is dangerous, unless the sub-nitrate is known to be pure.

It is interesting to note the number of organic compounds now made by synthesis from their inorganic elements.

The artificial manufacture of indigo has been made possible during the past year by the discovery of a method of making isatin, which, being deoxidized gives indigo.

The manufacture of artificial alizarin has caused many acres formerly devoted to the culture of madder, to be devoted to other purposes.

Benzoic acid may be successfully made from inorganic sources.

Ether, alcohol, acetic acid, chloroform, hydrate of choral, croton chloral hydrate, urea, nitrous ether and many other compounds, may now be made from their inorganic elements.

These advances point to the time when it may be possible to manufacture cheaply the medicines which are now obtained at great cost from their natural sources.

I will close what I have to say with the following words from an address by Prof. Crooks:

"Most medical men look on chemistry as a kind of adjunct to pharmacy—a knowledge of which will prevent them from poisoning their patients or from puzzling their pharmacists by prescribing a series of incompatibles. To such we would put a simple question: How is it that although the chemist during the last ten years has discovered many thousands of definite compounds possessing

the most multifarious chemical, physical, and presumably physiological properties that not half a dozen of these have been applied to the relief of human suffering or the saving of human life? Is it possible, even according to the vulgar doctrine of chance, that there are no compounds lying *perdu* on the shelves of the chemist's laboratory that would prove as powerful weapons in the hands of the physician, as chloroform, chloral, or amyl nitrite?

"The field open to the medical student in this direction is surely vast enough to content the hardest worker, and would surely be fruitful enough to satisfy the highest ambition."

ORIGIN OF AMNIOTIC FLUID.—Gusserow. (*Arch. f. Gynäk. XIII.*)

In 1871 G. demonstrated that soluble substances would pass by way of the circulation from mother to child, and from the latter to the amniotic fluid. He claims that this fluid is not only an exclusively fœtal product, but that during the later months of pregnancy it is mostly secreted by its kidneys.

Runge and Schmiedeberg proved that the conversion of benzoic into hippuric acid occurs only in the kidney. If hippuric acid be found in the urine of the fœtus after the mother had taken benzoic acid, the former must perforce have been formed in the kidneys of the fœtus, the blood carried to the latter being charged with benzoic acid. So, if hippuric acid be found in the amniotic fluid it must have been formed in the kidneys also, for if that fluid were merely a transudate, benzoic and not hippuric acid would be present.

Gusserow shows in a striking way that both the urine and amniotic fluid of the child contain hippuric acid when one to two grams of sodic benzoate were administered to the parturient several hours prior to rupture of the membranes

From these and such experiments as the injection of strychnia, he is led to believe that the amniotic fluid is mainly an excretion of the child, though it may have other minor sources.

Foreign Correspondence.

ARTICLE XII.

PROF. CHARCOT AND HIS EXPERIMENTS AT LA SALPÉTRIÈRE.

I brought with me from America a letter of introduction to Prof. Charcot, and visiting the Salpétrière soon after my arrival in Paris, in August, 1877, was fortunate in presenting it. At the same time an English physician of considerable eminence had called on the renowned neurologist, and we thus had the opportunity of seeing several of his demonstrations in private.

Although his experiments and their apparent results seemed to me something remarkable and inexplicable, I did not at the time, attribute much importance to them from a practical point of view, especially as Prof. Charcot was himself, *then*, undecided as to whether or not his new theories would develop to the point of utility in the treatment of these cases.

When I returned to Paris in the Autumn of 1878, and began attending Prof. Charcot's regular lectures at La Salpétrière, I found him more enthusiastic than ever regarding his new facts, which he went on to demonstrate in several discourses.

Such interest has the subject of his lectures elicited, that I saw among his attentive listeners, such men as Virchow and Martin, of Berlin, and many other renowned men of our profession. Not only on the Continent, but in Great Britain, his teachings are attracting so much interest, that I am induced to give the following summary of them, to the exclusion of matters which, I, myself, consider of more practical interest. Though it is Prof. Charcot upon whom, as a public teacher, the interest in this subject is at present directed, it was a Dr. Burge who claims to have

made the first discoveries in this direction. The latter first published his views, I believe, in 1876.

On my first visit to La Salpétrière I was shown two female patients, one about eighteen and the other twenty-three years of age, who were both the victims of frequent attacks of what Prof. Charcot denominates "Hystero-Epilepsy." One of these patients, the younger, had had these convulsions for the last two years very frequently, sometimes even to the number of fifty and one hundred in the twenty four hours. In spite of all this her intellect was not in the least affected; and that fact, in connection with this, that no period of cerebral congestion followed the fits, as in true epilepsy, are valuable aids in making a differential diagnosis between the two diseases.

These girls were both completely hemi-anæsthetic. On the side that was insensible, a large darning-needle could be passed through the skin without the least sensation being perceived by the patient.

METALLO-THERAPEUTICS.

But the most wonderful of the phenomena in these cases, was that by the application of certain metals or a large horse-shoe magnet to the side that was deprived of sensation, this abnormal condition would change from the side to which the metal was applied, to the one that had been before entirely normal. In one of these patients, who was anæsthetic on her *left* side, Prof. Charcot applied a twenty-franc gold piece to the outer aspect of the left arm, and after the expiration of three minutes it was found that a small circle around the gold coin had regained its sensibility, while at the same time a corresponding surface on the *right* arm had lost all sensation.

At the end of ten minutes the patient was completely anæsthetic on her *right* side, and had regained sensibility on her *left*.

Prof. Charcot said that some persons were susceptible to one metal and some to another, and brought forward the second patient in whom he produced exactly the same phenomena as in the first, by using a copper plate instead of a gold coin. He also stated that in all these cases there existed an ovarian tenderness on the side that was anæsthetic.

But the practical part of this matter as claimed by both Dr. Burge

and Prof. Charcot is, that the metal to which the patient is susceptible, or in other words, that which will change the anæsthetic condition from one side to the other, is the remedy that is indicated in the treatment of each particular case.

To the patient who was sensible to gold, he was giving daily .02 gramms of the chloride of gold and sodium.

To the patient who was sensible to copper, he was giving .3 grams of the hydrated binoxide of copper three times in a day. Through last year Prof. Charcot said he had not used these remedies sufficiently long to test their efficacy; this year in his public lectures he declares that the medicines have been in each case highly beneficial in lessening the frequency of the attacks, and improving the general condition of the patients. Still, he did not admit that in any instance he had been able to effect a complete cure.

Although the principles involved were the same as in the experiments I had seen Prof. Charcot perform in private, in his public lectures he greatly extended them, and brought forward a number of new cases to illustrate his subject.

In one case the entire throat was so entirely anæsthetic that the Doctor could irritate the epiglottis with his finger without producing the slighest reflex phenomenon.

A copper plate, 3 by 5 centimeters, was tried over the front of this patient's throat for seven minutes, at the end of which time she was so sensitive that any attempt at passing the finger into the pharynx brought on violent attempts at vomiting. The hystero-epileptic patients who were hemi-anæsthetic had many of them another remarkable symptom, and that was complete color-blindness on the side that was insensible.

In the case of a girl eighteen years of age who was anæsthetic on her right side, the left eye was closed, and red, blue, green and orange-colored cards that were passed before the right eye, were all pronounced by the patient as *white*.

The copper plate that had been bound on to the throat of the previous patient, was bound on to the right temple of this one, and in five minutes she could accurately discern colors with her right eye, but was as completely color-blind in her left, as she had previously been in her right. The migration of sensibility

and sense that these persons experienced upon the application of the metals was, in every instance, only temporary in character, as, after the expiration of a variable period of time, say from ten to thirty minutes, the old condition of hemi-anæsthesia was found to exist on the side at first affected.

A woman, 47 years of age, who had passed the menopause was presented, who had been the victim of hystero-epileptic attacks from her early womanhood, a case demonstrating the fact that this disease will not always cease with the cessation of the menses.

This patient had had for years a permanent contraction of the flexors of the fingers and hand of the right side. A large horse-shoe magnet was placed near the outer aspect of the right arm, and in about five minutes the rigid contractions in the muscles of this side began to give way, and in ten minutes she was able to use freely and without restraint the right hand, but the condition of contraction had been transferred to the flexors of the left hand.

The transposal of this abnormal condition only lasted for a few moments after the magnet was removed, for in fifteen minutes her right hand presented the same appearance as when she entered the room.

During his second lecture Prof. Charcot brought on to the platform two patients whom I recognized at once as those upon whom I had seen him experiment in 1877. They were seated in chairs near each other; and an immense tuning fork placed between them. This instrument was then struck, and when it began to sound, both girls with perfect accord fell into a cataleptic condition. Their eyes widely opened seemed to gaze with a vacant stare at some far-off object. Their hands, arms, and other parts of their bodies could be placed in any given attitude and would thus remain for an indefinite period of time. They could be aroused from this condition by suddenly blowing into their faces, or pressing upon the ovary that was sensitive.

The sudden flame of a light from an electric lamp thrown into the eyes of these patients, or even the fixed gaze of Prof. Charcot's eye, would produce the same phenomena. From this cataleptic condition, if not disturbed, the patient would pass into

that of a somnambulic state. Prof. Charcot said: "This is the condition into which animal magnetizers plunge hysterical persons, and, during its persistence, they cause them to perform mystical acts such as walking in the dark, describing absent persons, distant places, and the like. From this condition I arouse this patient by pressing suddenly upon one of her ovaries. She may not be entirely herself for a quarter of an hour, but will soon regain her normal condition."

In his third lecture Prof. Charcot brought into the lecture-room a girl about 20 years of age lying upon a cot, dressed in a long garment, the sleeves and legs of which extended far beyond the hands and feet, and to which were attached long pieces of cord to control her during her convulsive paroxysms. The patient had an aparatus around her body (a new invention of Dr. Poirier), constructed something like a tourniquet for compressing the abdominal aorta, but in which the pad was made to press upon the right ovary. This truss was removed from this patient, and she at once went into a series of violent convulsions. During the time of these attacks Prof. Charcot gave a minute description of each phase of her symptoms.

As to the diagnosis he said: "Of the affection, as distinguished from true epilepsy, we have first to observe that the fits always occur during the waking hours of the patient.

"Again, they never fall down in the street in convulsions, for they have always premonitory symptoms that last a sufficient length of time to allow them to seek a place of safety before the attacks occur.

"Each paroxysm consists of a certain regular and definite series of evolutions.

"First, you see this patient extends her arms over her head, then gradually draws them down over her abdomen, and, after keeping them in a tonic spastic condition of contraction for a few seconds, she begins a series of active clonic spasms.

"This stage in which the patient is at present, is the epileptiform period of the attack.

"There is no physician of experience who, stepping into this room at this moment and viewing this patient for the first time, but would diagnosticate her case as one of *true* epilepsy.

"Our patient, after these clonic spasms are over, will remain quiet for a few seconds, and then the attack will resume its hysterical type again, *phase des grands mouvements*, in which you see she executes a series of rapid to and fro movements with her entire body. When these *grands mouvements* are over, the next stage of the attack begins, which is *la phase des attitudes passionelles*, in which, raising herself to a sitting posture, she alternately strikes an attitude and wears an expression of fear and hatred, and then of joy and extreme bliss.

"At one time she will see horrid objects that approach her, and in the next moment her visions are of the most fascinating kind, and she hears the strains of sweetest music.

"After these last phenomena have occurred, our patient will remain quiet for an indefinite period of time, and will then execute again the same series of movements and attitudes as before."

After the doctor had allowed her to undergo these convulsions sufficiently long to illustrate to his hearers all their different stages and symptoms, he pressed firmly with his closed fist on her right ovary, and the patient, heaving a long sigh of relief, the convulsions ceased at once.

The instrument for the production of continuous pressure was replaced, and in five minutes she was again in a normal condition.

The hystero-epileptic attacks with these patients usually occur without immediate exciting cause, although fear and anger have a tendency to develop them.

There is, in most of them, an *epileptogenic zone*, which may be situated in any part of the body, and which, being pressed upon, or in any way irritated, will throw the patient at once into a violent series of convulsions.

Prof. Charcot, just before the close of one of his lectures, showed a person in whom he said this sensitive zone was at the last cervical vertebra.

As the girl stood in the hall through which the students passed as they went from the lecture-room, one of them took occasion to verify Prof. Charcot's assertion by suddenly pressing his finger on this point of her spine. The poor creature fell down as suddenly

as if shot, on the stone floor, and went into convulsions of as violent a character as I ever saw.

Dr. Oulmont, Prof. Charcot's interne, soon made his appearance, and coming down with the whole weight of his body upon the right ovary of the patient with his closed hand, he was soon able to arrest the paroxyms.

Prof. Charcot closed this lecture by showing us, by means of a magic lantern, copies of paintings of the old masters, representing persons as being possessed of the devil, and priests casting them out, in whom the attitudes and expressions of the persons represented were an exact counterpart of some phase or stage in the hysterical attacks of the patients he had shown us.

WHAT IS THOUGHT OF PROF. CHARCOT AND HIS TEACHINGS.

A vast majority of those who listen to Prof. Charcot at La Salpétrière have such an implicit faith in the integrity and wisdom of the man, that they believe that he could not be deceived by the patients upon whom he operates, and would present nothing to his hearers in which he *himself* had not the most unbounded faith.

The great Claude Bernard evidently believed these phenomena to be genuine, for, after witnessing them just before his death, he was perfectly astounded at their manifestations, and exclaimed, "*these facts show us how little we know.*"

Although this represents the sentiments of that portion of the profession who are thrown in immediate contact with Prof. Charcot, it is far from being generally adopted outside of Paris and France.

Here, in Berlin, the first evening that I went to hear Prof. Westphal, he brought out for the subject of his lecture an hystero-epileptic patient.

This patient was fifty-three years of age, and was what Prof. Westphal designated as a true type of hystero-epilepsy which has been of twenty-five years duration. She was nearly idiotic, thus showing that the disease *does* effect the intellect.

He claimed that the nice points in the diagnosis of this disease as given by Prof. Charcot, could not always be recognized in practice.

A case like this might be one of *genuine* epilepsy affecting a person of hysterical temperament, in which one could not always decide, as to where, in any given attack, the hysterical element ends, and the epileptic begins.

He went on to refute the generalized statement that one could arrest the paroxysims by pressure upon the ovaries, so that ovarian tenderness was a prominent symptom attending them.

He said that he and Prof. Schröder had experimented upon a number of cases by making *direct* pressure upon the ovaries by combined manipulation through the vaginal and abdominal walls and had found that the ovaries were not generally in the least sensitive. Besides he was of the opinion that Prof. Charcot, with his mode of manipulating, *did not in one case out of five touch the ovary.*

Furthermore in the single case of a male patient, whom he had had under observation and who had all the symptoms of genuine hystero-epilepsy, he was able to arrest the paroxysms as effectually by firm pressure into one of the iliac fossæ as Dr. Charcot had been able to do in his cases, where he had *supposed* he was pressing upon a sensitive ovary.

He believes that the arrest of the convulsive attacks in these cases is due to a general reflex action produced by pressure upon the pelvic nerves.

After this lecture, I had a private interview with Prof. Westphal, and he, knowing that I had just came from Paris, began at once to question me as to what I had seen of Prof. Charcot's doings at La Salpétrière. Finding him skeptical as to the genuinenesss of the entire phenomena of metallo-therapeutics I asked him his explanation of Prof. Charcot's experiments.

He told me then promptly that, much as he had formerly admired the great French physiologist, in this matter, Prof. Charcot was playing the part of a mountebank and juggler. I then asked him what object a man of his standing could have for taking such a course. "Money! money!" was his reply. At this juncture we were interrupted or I should have interrogated Prof. Westphal farther; for, to me, it is inconceivable that a man of Prof. Charcot's standing should take the course in this matter that he does, unless he firmly believes in what he teaches;

besides, I cannot see how he can make money from his demonstrations and lectures, as all of them are free.

As bearing upon this subject and giving, in my view, the best explanation I will close the article by giving the following history of a case as published by Dr. Hughes Bennett, in a late number of the *British Medical Journal:*

In August, 1877, a woman 44 years of age, was admitted to Dr. Bennett's wards, having for four years been the subject of a variety of nervous attacks, without real convulsions. She was in tolerable health but was entirely anæsthetic on her right side. Needles passed through the skin of the side, and the most powerful Faradic currents produced no sensation. The left side was nearly natural.

From Aug., 1877, to April, 1878, the patient was treated by tonics and electricity, but without any effect; in fact the paresis and anæsthesia had become more marked. The attention of Dr. Bennett having been called to the subject of metallo-therapy by some published accounts of Prof. Charcot's demonstrations, he (Dr. B.,) resolved to put his patient upon this treatment.

Accordingly the patient was blindfolded, so that she could not see what was doing, and discs composed of various metals as gold, silver, copper, lead, zinc, and tin were applied to the anæsthetic side without producing the least effect.

After Dr. Bennett had tried these experiments repeatedly, and was convinced that no result would follow, he invited several medical friends to witness them. At this time he applied a zinc plate to the arm, and after it had been on for twenty minutes the patient said she felt a tickling sensation in the part, and, to the Doctor's surprise, he found that slight pricks of a pin could be felt. A few moments later, sensibility had returned to the side so long insensible. Twenty-four hours after this experiment, the right side was found in its original anæsthetic condition.

It was now found that *all* the metals that had before failed to produce an effect upon this patient, would each, when applied, produce a temporary return of sensibility to the parts. At this juncture Dr. Bennett applied two discs of wood upon the arm, and found that after they had been on for a few moments, sensi-

bility had returned to the side exactly as when *metals* had been used.

The result of all this was, no marked benefit to the patient, and some months later she was sent to the seaside. Dr. Bennett deduces from this, that the reason why he produced no effect upon his patient in his first experiments was that she was entirely ignorant of what results were attempted to be attained.

When he had summoned his friends in order to demonstrate to them that Prof. Charcot's results were not obtainable, lo, the very phenomenon that he was positive would *not* occur, did actually happen; and why? Simply because it was necessary for him to make some explanation of the subject in the presence of his patient. As soon as she knew what *effect* was intended to be produced, that effect followed.

Dr. Bennett closes his review of this subject in these words: "There are always those who, either from an involuntary bias of mind, or from a natural credulity in what appears marvelous, seem to think that what is difficult of explanation must of necessity be true. Thus does the spiritualist and the electro-biologist pledge his faith to what his reason cannot comprehend, and what he perhaps honestly believes to be genuine.

"As well might one credit the reality of the tricks of a conjuror, because it baffles all our efforts to appreciate the steps by which he deceives us.

"In all these hypotheses, the more we eliminate sources of error, the more that unprejudiced observers investigate the subject, and the more that stringent tests are applied, the more easy and simple do we find these 'inexplicable phenomena' become.

"It may be that metallo-therapy, the most recent of the doctrines which have flattered the psychological world, is doomed to an early grave, to be resurrected in the future in some other novel and more attractive form." W. S. CALDWELL.

BERLIN, Jan. 1, 1879.

DIPHTHERIA was named from the skin of the goat Amalthea, on which Jove wrote the destiny of man.

Domestic Correspondence.

ARTICLE XIII.

BOSTON LETTER.

MESSRS. EDITORS:—The profession of medicine in Boston has a strong but quiet flow. Much goes on which comes to the knowledge of but few outside of certain circles. It is almost odd that here there is a lack of that medical gossip which is a strong, a pleasant and a useful characteristic in other cities. I suppose there is no city in the country in which medicine is more reserved and retiring than in Boston. We are decidedly and essentially conservative. It might be a difficult matter to discover the reason of this—to trace back to its original causes the very calm tone of the medical mind in this city. It doubtless would be still more difficult to say why it is that in this fruitful age of medicine, the men here who carry the responsibilities which are laid upon them by great opportunity and wealth of material, are so silent toward that great world of medicine which awaits, expects and longs for revelations from the comparative few who hold the golden key to a treasure house which here is opened, not freely, not generously, but only to a favored few. In justice to the younger men, however, and notably the specialists, I should say that this surprising conservatism is almost wholly a fault, for it is a fault, of the older men. The young physicians of Boston have plenty of that sort of enthusiasm which leads one at once to impart to the profession at large, not only all new facts, new data, new effects of medicines, new discoveries in medical science, but also any modifications of facts already known. But they do this in spite of a chilling influence which arises from the marked reserve of the older men, many of whom rarely touch a pen in

behalf of medical publications, so that much which would benefit our common cause remains unwritten, and but for the students and occasionally the medical societies of Boston, would likewise remain unspoken and unrevealed. Why is this? Is it apathy? Is it lack of a sympathetic desire to advance the medical knowledge of the many? Is it heedlessness of responsibility? None of these reasons explain the facts; for the interest of these men in all that pertains to medicine is deep and intense. The kindest explanation of this reserve and silence is, that habit is the cause, habit which has become more powerful than the desire to break it. And yet the men to whom I refer are men of great ability, of unusual acumen, of large intelligence and profound learning. They should be known throughout the country, but with some exceptions they are not known to any degree out of the State. If this seem exaggeration, I would ask you, with how many standard, original medical works you are familiar which were written in Boston within the past twenty-five years? It is weakness in a medical man to write a book unless he have something new to say, or a new and better method of presenting a known subject. But it is impossible that men who are mature in knowledge, rich in experience, hard students, keen diagnosticians, and who control and handle a vast amount of material, have not something to say which would increase the knowledge of every man who read or heard it. If one see a common fault which might easily be removed, should he not frankly bring it into notice, especially if he do so with the sincere and earnest hope that his frankness may be suggestive? This is my apology for bluntness in alluding to men whose power and ability have won my sincerest respect, and whose light, let us hope, will be set upon the house-top before they depart. For, every mind of power should work not only for the present but also in behalf of posterity.

On the other hand, we point with pride to those reports on the progress of medicine, surgery, and kindred branches which are published in the *Boston Medical and Surgical Journal*, and which are accumulating in quantity and value. Published in book form they would be invaluable for reference. These reports are the work of young men, who are not mere harvesters of the fields of

other men's planting, but whose intelligent and critical opinions and experience increase the usefulness of this history of the growth of medicine in all its relations. Probably, then, in the coming 25 years, this habit of writing on the part of young men will give a far different complexion to the future medical history of Boston from that which has characterized it during the past quarter of a century. After completing their studies at the Harvard Medical School, quite a large proportion of the city men go abroad. Indeed, where the means to do so are forthcoming, a year or two in the German schools is rather the rule than the exception. The effect of this has been apparent for some years in the more generous recognition of specialties here than is the case in other cities. But it can be said with perfect truth, that specialists in Boston are not confined to the narrow path of their choice, for in almost every instance there exists a good, solid foundation of experience which has been derived from hospital and general practice.

This removes a large share of that prejudice against specialties which is a common feeling of the older medical men everywhere. And it must be confessed that without a foundation of general medical knowledge, the pursuit of a single branch of medical science, has a tendency not only to make a man narrow, but its influence is liable to give him a one-sided view of his cases

I think I may say that our medical societies compare favorably with those of other American cities, for, if our older men do not write, many of them are faithful attendants of, and active participants in, our Society meetings. Their presence gives a firmer and maturer tone to discussions, and exerts a wholesome influence upon younger men of lax tendencies. Our most democratic meeting is that of the Suffolk District Society, a branch of the State Society. It is attended by every class of medical mind, while the smaller associations, the Society for Medical Improvement and the Society for Medical Observation, are composed of men who, for the most part, are constant students and steady workers; thinkers—men who have opinions and are able to express them. The first of these societies devotes itself mainly to pathology and possesses a fine anatomical collection, now in keeping of the Medical School. The other occupies itself with clinical dis-

cussion and research. In the Suffolk District Society, any subject which has a direct or indirect bearing upon medicine is in order. There are various other societies which I will not at present mention. But I may say that in the Harvard Medical School is an organization of great educational value. This is the Boylston Medical Society—composed of students, presided over by a physician who is elected by the active members, the object of the Society being to stimulate emulation and inquiry among the students. It was organized in 1811. The beneficial effects of this association are at once apparent. The members become habituated to discussion of medical topics; they become familiar with parliamentary laws; they learn how to prepare papers, and since the subject of papers which are read at the meetings are announced beforehand, the active and ambitious are led to read and make themselves ready for discussion. By this means, too, they are prepared to do good work in the societies of which they may become members in the future. This society should be imitated wherever medicine is taught. There are other features of medical teaching in the Harvard School, which not only make it the most desirable school in the country, but which are peculiar to it. In a future letter I will give you interesting details of the management of this department of Harvard University. Its adoption of a higher and more stringent standard of education was a bold move. It was an indication of the purity of the desire of the faculty of teachers to raise the educational level of the school, and to improve the quality of their graduates—for, in order to accomplish this desire, every man of the faculty was obliged to make personal sacrifice by yielding a portion of his salary. If this be not an evidence of sincerity, show me a better. Everybody knows that the great stumbling block in the upward path of other successful medical schools, is the fear lest the yearly income become smaller. This hyperæsthesia of the pocket nerve is what prolonged the discussion of the question of higher standards at the University of Pennsylvania, and which keeps other medical schools in the trammels of the old-fashioned, unsystematic olla podrida plan of teaching. So far as the Harvard School is concerned, the change

has been a perfect success. The quality of the students has become vastly improved, and the value of the dioploma, of course, is above that of any other American school. For while the standard at the Medical School of the University of Pennsylvania has been raised. there is no preliminary examination, and other requirements are not so strict as in our school. In making the change in the plan of education, the authorities of the Harvard School were obliged to assume risks which Dr. Henry J. Bigelow tersely expressed as follows: 1. "The reduction of the salaries of the professors. 2. Reduction of the hole of escape for students. 3. Putting the students through a preliminary sieve." The possible effect of these conditions, however, was cordially and bravely assumed, with results which simply make us all proud of the school which never has been more successful. Moreover, it is so conducted, the opportunities for clinical and surgical teaching are so wisely and shrewdly used, and such a variety of specialties stands upon the roster, that the necessity for going abroad is no longer urgent. Students can not only become accomplished in any branch of medicine they may elect, but are not obliged to leave the school upon graduation, for they may at once enter upon the "post graduate course," which is open to older physicians as well as to recent graduates, and comprises *fourteen* special studies taught by accomplished men who have have received special training. It is a matter of surprise that the *New York Medical Record* was not aware of this course. In the edition of December 28, an editorial in that journal gravely suggests that the time has come for some school to take the "initiative" in giving lectures and instructions to physicians. This plan has been successfully pursued at the Harvard School for several years. The faculty is very much in earnest in giving the school the most modern methods of teaching, and in acquainting its students with every new and approved fact in medical science. These remarks are merely introductory to much which I shall have to say hereafter.

Within a few days we have followed to the grave two Boston physicians of high fame, Dr. Jacob Bigelow, father of Dr. Henry J. Bigelow, and once so active as teacher, author, physician, and

scientist, and Dr. J. B. S. Jackson, the distinguished pathologist. Dr. Bigelow was formerly a Harvard professor; was ex-president of the American Medical Association; was long a president of the American Society of Arts and Sciences, and was the oldest member of the Massachusetts Medical Society. His work on "American Medical Botany;" his work on "Nature in Diseases," and other medical and literary publications are well known. It was to his influence that the inauguration of our excellent Institute of Technology was mainly due. Indeed he was the first to bring into use the term technology, in its present signification. He was also the wise founder of our beautiful Mount Auburn Cemetery, whose architectural beauties were designed by him and which has served as a model for similar places in our country. Dr. Bigelow has lived so long in retirement that many of the present generation never have seen him.

He died at the unusual age of ninety-one years, following close upon the steps of a man whose age was venerable but who was so much younger than Dr. Bigelow, that he was born in the same year in which Dr. Bigelow graduated from Harvard. Jackson died at the age of seventy-two. He was a pathologist of such enthusiasm that his whole life has been devoted to his beloved specialty. For many years he has been professor of pathology in the Harvard School. He was a pathologist of the old school. He was not a microscopist. But his unaided eye often told the truth when the microscope failed. His life was bound up in the Warren Anatomical Museum and the Cabinet of the Society for Medical Improvement. His catalogue of the former is an octavo volume of 750 pages. That of the latter amounts to 350 pages. The earnest faithfulness with which he devoted himself to the arrangement and description of these two collections cost him half a life time, but the museums have a world-wide fame, and they form a lasting monument to the profound pathological knowledge of Dr. Jackson.

* *

BOSTON, Jan. 22, 1879.

ARTICLE XIV.

To the Editors of the Chicago Medical Journal and Examiner:

GENTLEMEN:—In the January number of your journal, Dr. Tucker calls attention to "Tincture of Thapsus" (*sic*), and states that "it has long been a favorite remedy with the so-called 'eclectics,' whose leading pharmacist first called my attention to it." The doctor has fallen into error as regards the name of the plant whose virtues were well known long ago in Europe and even in this country before the revolution. It was formerly called the *thlaspi bursæ pastoris*, but is now named by botanists *capsella bursæ pastoris*, the English name of which is "shepherd's purse." The *Cincinnati Medical Gazette* for Nov., 1878, a journal which appears to be an organ of the "Physio-Medical" sect, contains the following:—"CAPSELLA BURSA PASTORIS.—Some eighteen months ago, Dr. Rademacher, of Germany, spoke highly of this plant as a remedy for irritable bladder," etc.

The *Chicago Medical Times* for Jan., 1879 (an eclectic journal), contains an article on capsella bursa pastoris, illustrated with a wood-cut. In the article we find that: "Dr. Carl Kissel states that, 'it is a vascular remedy, healing affections which appear as chronic diarrhœa, inflammation of the kidneys with sediment of uric acid,'" etc.

The foregoing quotations exhibit a curious mingling of fact and error, and as I have personally used the drug with satisfaction for some time past, I will endeavor to clear up the confusion a little. Under the name Thlaspi burs. past., SCHOEPF (*Materia Medica Americana*, Erlangen, 1787, p. 103) speaks of it as astringent, and useful in hæmorrhages. In Europe it had long been known as a domestic remedy, but Rademacher was the first to give it prominence. In his curious work entitled, "*Rechtfertigung der von den Gelehrten misskaunten verstandesrechten Erfahrungsheillehre der alten Scheidekünstigen Geheimärtze*," —2 vols., Berlin, 1846–7—he speaks of the "Herba Bursæ pastoris" as follows: "*Dieses Kraut galt in der alten Welt für*

eine blutstillende Arzenei." Dr. Carl Kissel was one of Rademacher's followers, and speaks of the drug in his work entitled "Die Heilmittel Rademachers und der naturwissenschaftlichen Therapie," Giessen 1859. My own attention was first called to it by my friend Dr. Frankel of this city, who referred me for further information to the work last mentined. I have used it with satisfaction in cases of irritated bladder in doses of 10 to 30 drops of the tincture sold in homœopathic pharmacies under the name of "Thlaspi." If it should come into frequent use, I would suggest that the old pharmaceutical name, *tinct. bursæ pastoris*, be retained. Respectfully yours,

H. G. PIFFARD, M.D.

NEW YORK, Jan. 20, 1879.

FATAL POISONING BY OIL OF CHENOPODIUM.—(*Maryland Medical Journal*, Nov., 1878.)—Dr. T. R. Brown reports the case of a hypochondriac, who imagined himself to be suffering, among other difficulties, from intestinal worms. For this the doctor recommended an ounce of castor oil with twenty drops of turpentine. The patient procured an *ounce and a half* of worm-seed oil and added *thirty* drops of turpentine. Within a few hours he acted strangely, his gait being unsteady, face pale and anxious, etc. Following this he sank into a heavy slumber, vomited during sleep, was aroused without much difficulty, but sank into the same sleep again unless constantly diverted. Within two days he became very deaf to sounds of the voice, but acutely sensitive to noises and jars about the house. This was succeeded by an aphasic attack, coming on slowly, and increasing; and this by paralysis of the right arm, pyrexia, unilateral convulsions (right side), involuntary dejections, icterus, general opisthotonic convulsions, coma and death on the fifth day.

No *post-mortem* was allowed. So far as the author knows this is first case of fatal poisoning by this drug on record, though fatal cases have happened before.

Editorial.

ARTICLE XV.

ANENT MEDICAL JOURNALS.

The second semi-centennial of the existence of the *Boston Medical and Surgical Journal* is fitly begun by the publication of an interesting and valuable communication by Dr. J. S. Billings, of the U. S. Army, on the subject of the medical journals of the United States. The article fills nearly fourteen pages of type, and some idea of its character may be gained from the fact that ten of these pages, in small type, are fully occupied by a complete list of all the medical journals that have ever been published in the country, arranged according to States. The history of medical journalism in Illinois is almost the history of the varying fortunes of the CHICAGO MEDICAL JOURNAL AND EXAMINER, as may be seen from the following extract:

"ILLINOIS.—The *Illinois Medical and Surgical Journal.* Monthly. Edited by J. V. Z. Blaney. Chicago. Vols. I.–II.; 1844–46. 8vo. Continued as the following: The *Illinois and Indiana Medical and Surgical Journal.* Bi-monthly. Edited by J. V. Z. Blaney, D. Brainard and others. Chicago. Vols. I.–II. 1846–1848. 8vo. Continuation of the preceding and continued as the following: The *Northwestern Medical and Surgical Journal.* Bi-monthly. Edited by W. B. Herrick and J. Evans. Chicago. Vols. V.–XIV. 1848–57. 8 vo. Continuation of the preceding and continued as the following: The *Chicago Medical Journal.* Monthly. Edited by N. S. Davis and W. H. Byford. Chicago. Vols. XV.–XXXI, 1858–1875. 8vo. (*) Continuation of the preceding and consolidated with the *Medical Examiner*, Chicago, forming the following: Vols. XXV. and XXVI. Semi-monthly. THE CHICAGO MEDICAL JOURNAL AND EXAMINER. Edited by W. H. Byford and others. Chicago. Vols. XXXII–XXXVII. 1875–1878. 8vo. Current. Formed by the consolidation of the preced-

* Between the years 1858 and 1875 many changes occurred in the editorial staff. At the date of the consolidation in 1875, the *Chicago Medical Journal* was edited by Prof. J. Adams Allen, assisted by Dr. Walter Hay, late of this city.—[ED.]

ing with the *Chicago Medical Examiner*. The *Northwestern Medical Intelligencer*. Bi-monthly. Chicago. 1851. 8 vo. This alternated with the *Northwestern Medical and Surgical Journal*, of which it formed a part. The *Chicago Medical Examiner*. Monthly. Edited by N. S. Davis and E. A. Steele. Chicago. Vols. I.–XII. 1860–1871. 8 vo. Continued as the following: The *Medical Examiner*. Chicago. Semi-monthly. Edited by N. S. Davis and F. H. Davis. Vols. XIII.–XVI. 1872–1875. 4to. In September, 1875, united with the *Chicago Medical Journal*, forming THE CHICAGO MEDICAL JOURNAL AND EXAMINER."

The other journals of the State are registered as follows:

"The *Military Tract Medical Reporter*, L. S. & C. A. Lambert. Galesburg, Ill. Prospectus issued in August, 1871, but the journal never appeared. The *Chicago Journal of Nervous and Mental Disease*. Edited by J. S. Jewell and others. Chicago. Vols. I.–II. 1874–1875. 8vo. Continued as the following: The *Journal of Nervous and Mental Disease*. Edited by J. S. Jewell and others. Chicago. Vols. I–III. New series 1876–1878. 8vo. Continuation of the preceding. *The Medical Register and Advertiser*. Quarterly. Edited by J. I. Hale. Anna, Ill. Nos. 1–2. Vol. 1. 1875. 8vo. The *Monthly Journal of the Southern Illinois Medical Association*. Edited by C. W. Dunning and H. Wardner. Cairo. Vols. I–II. 1877–'78. Vol. I. in six numbers. Current. The *Illinois Medical Recorder*. Monthly. Edited by R. E. Beech. Published under the auspices of the District Medical Society of Central Illinois. Nos. 1–6. June to November. 1878. 8vo. Current. The *American Medical Review and Index*. Monthly. James I. Hale, editor. Anna, Ill. Nos. 1–3. July to September. 1878. 8vo. Current."

Looking at the table of mortality statistics of medical journals throughout the country, we find that of 247 titles commenced (in 1,630 volumes), in ten cases only one number was issued; in twenty-one cases the first volume was never completed; in sixty-one cases there was no survival beyond the first volume; in thirty-nine there was no survival beyond the second volume; and but fifty-three journals of the entire number are now current. These facts furnish in themselves a fertile commentary upon the reasons for which many of the smaller journals exist—journals which have been published,—"not for direct profit, but as an indirect advertisement, or—and this is more common—the desire to have a place in which the editor can speak his mind and attack his enemies without restraint."

We could wish that Dr. Billings, or some other writer of equal ability, might have the courage to further divide the fifty-three survivors into two classes—the one to represent the journals which are conducted with a view solely to the advancement

of science, the others to include those which are the pure and simple advertisements of individuals, medical schools, or dealers in drugs. Though we have often referred to the subject before in these pages, we venture to repeat here that the real prosperity of THE CHICAGO MEDICAL JOURNAL AND EXAMINER dates from the hour when its management passed into the hands of the body of the profession in this city, and its two predecessors ceased to be the organs of the two leading medical schools of Chicago. It is a curious commentary on this divorce, that the medical colleges referred to have actually benefited by the change. The stock of the Chicago Medical Press Association is held by eighty-three prominent professional gentlemen of this city, who represent every institution and phase of medical interest.

We have carefully perused the list of the fifty-three surviving journals and have deliberately concluded that but from fourteen to twenty are of any permanent value to the profession, and worthy of general circulation or to be sent abroad and handed down to posterity as fit exponents of American medical periodical literature. Some of the others possess no value whatever apart from the gleanings which they regularly make from the crops carefully harvested by their more thrifty neighbors. Some are absolutely worthless, judged from any stand-point, and a few are undeniably worse than worthless—they are dangerous and disgusting parasites upon the body medical.

Of this latter class are the cheap publications which aim to be classed as medical journals, but which are really the clumsily disguised advertising sheets of certain pretentious drug-houses of doubtful reputation. Some of these have lately embarked in the business of attempting to add several doubtful "novelties" to the *ruda indigestaque moles* of the drug lists. Though exposed in one instance, an exposure which it is to be hoped will not be without effect upon the others, one can still see in their pages brief certificates from "physicians" in various parts of the country as to the singular value of this or that "remedy." The names of these endorsers are usually unknown in any other connection, and will be vainly sought among the list of contributors to really scientific periodicals. Some of them, we blush to say it, have pushed their trashy reports into the proceedings of

State Societies. Others figure as authors in the absurdly incongruous Materia Medica lists of the homœopathic journals.

The sterling common sense of the mass of the physicians throughout the country must supply the remedy for this evil. We call upon every good man, who values his own reputation, and who cares for the elevation of the standards of the profession he has chosen, to contribute money for the support of the best medical journals, and of these only. In this connection we do not ask such to subscribe for this particular journal. The subject is one of such importance that if the desired result could be completely attained by the suppression of this periodical, we would gladly make the sacrifice in the interest of the profession at large. But the MEDICAL JOURNAL AND EXAMINER happens to be one of the very few publications of the country that is neither a piece of private property nor an organ. It has advanced to the first rank of American journals, by the observation of the very principles which are now emphasized. Content with its own position and circulation, it urges the medical men of the United States to cease contributing to the support of the weakly publications that eke out a miserable existence on the pabulum of the advertisement.

It is the duty and interest of every physician in the land to support heartily the best of our journals, and none other. Let it be understood that it is a stigma upon one's reputation, that his name has appeared in an obscure advertising sheet in connection with the endorsement of a questionable "novelty" in drugs, or even as an author. And we call upon the editors of the respectable medical journals of America to refuse an exchange with every periodical of doubtful character and provincial position. That will be a bright day for medical journalism in the United States, which sees the organization of an Associated Medical Press, membership to which will be restricted to the managing editors of really good journals in existence, the privilege of membership and exchange to be granted only by unanimous consent of those already in enjoyment of these privileges. Under such an arrangement, advertising firms and book publishers might cease to offer a premium for mediocrity and worthlessness in the periodical medical literature of our land.

ARTICLE XVI.

THE LAW AS TO THE COMMITMENT OF THE INSANE, IN ILLINOIS.

One of the first things done at the present session of the legislature of this State, should be a thorough reconstruction of the law relating to the commitment of the insane.

As the case stands at present, it is, or should be, well-known, that it is necessary to drag the insane person, male or female, young or old, or physically infirm, and their friends with them, from their homes, often at the cost of distressing inconvenience, to a public examination in a court room, amid a crowd of lawyers, on and before a jury, composed, at best, of average non-professional citizens, selected at random, largely ignorant of the subject upon which they are to pronounce. The only relief provided lies in the fact that *one physician* is required to be placed on the jury.

Besides the inconveniences of the present system there is to be objected against it, that it frequently happens that plain cases of insidious or even dangerous insanity are declared under it, to be sane, and are set free, to the annoyance and danger of friends and neighbors, or to the peril of their own lives, where the tendency is suicidal, because the jury very naturally happens to be ignorant of the more uncomman forms of mental unsoundness, or of the symptoms of such disease in its incipient stages. Then again there are but few families or persons not more or less reluctant to making a public spectacle of their friends while in a state of insanity. The present system has fostered and will continue to foster, the feeling which pervades the minds of the people, that insanity is not simply a disease,—an affliction, but a disgrace. This sentiment, quite natural under the circumstances, has often prevented, and will continue to prevent such cases from being promptly reported, and hence directly tends to prevent them from being early placed under suitable treatment. But these and other disadvantages could be quietly borne, if the present system were the best that could be devised in the interest of pub-

lic and private justice. But it is so plain that there is a better way, that there is no valid excuse for delaying action.

The system we need in Illinois is the one adopted long since in many of the Eastern States and in the most enlightened foreign countries. It is usually embodied in a simple law, creating commissioners in lunacy. These are generally composed of two or more medical men of standing and experience, and a magistrate or lawyer, the appointment of the commissioners under the law being delegated to the judges of the courts within whose jurisdiction they are to act.

These commissioners may be either temporary or permanent, and be ready to act when and where the exigencies of the insane require.

The action of this commission, as suggested by Dr. Patterson, of Batavia, in his recent letter, might be supplemented by a jury trial before the courts as at present, if requested by the parties interested. The advantages of such a mode of procedure, as compared with the one at present in vogue are so manifest that it seems surprising all do not see them at once.

A more intelligent, and it may be maintained, a more just judgment would be reached than by the present system, and the Commission could act any day, instead of one day in each week, or every two weeks, and could, and would, when necessary, as it often is, visit the residence of the patient. By all means let the present law be at once modified, in conformity to more advanced ideas, and thus the present piece of clumsy legislation be forever removed from our statute books.

ARTICLE XVII.

THE JOURNAL OF NERVOUS AND MENTAL DISEASE.

Our only journalistic collaborator in the field of regular medicine in this city, the *Journal of Nervous and Mental Disease*, commences with the present year its sixth volume. Though started under difficulties that might have deterred many from such an enterprise, it has risen to be the recognized organ of the neurologists of this country, and has achieved an international

reputation. That is not a narrow specialty it covers, but one possessing interest for every physician who is above mere routine practice.

We take the highest pleasure in again commending our journalistic contemporary to our readers and correspondents.

INFLUENCE OF MOTION ON BACTERIA. B. A. Horrath. (*Pflüger's Archiv. Bd. XVII, p.* 125.)

From the fact, that bacteria injected into the circulation disappear rapidly from the blood-vessels, and are only found in the lymphatics, H. supposed, that a relative rest is necessary to the growth and multiplication of these organisms. In order to test this view, he introduced bacteria into a nutrient fluid composed of 10.0 grams neutral tartrate of ammonium, 5.0 acid phosphate of potassium, 5.0 sulphate of magnesium and 0.5 chloride of potassium in 1 litre water, (Pasteur's fluid.) Glass tubes were filled partly with this fluid, partly with air and sealed. The tubes, which were left undisturbed at a temperature of 24° C, were soon turbid with living bacteria. A number of tubes, however, were attached to a board, which was shaken about a hundred times a minute by a water motor. By this incessant motion, further growth of bacteria was checked, but if the tubes were set aside after 24 hours shaking, bacterial development again occurred. When, however, the motion was kept up for 48 hours the organisms were killed absolutely. (*Centralbl. f. Chir.* 1878, No. 43.)

WHICH ELECTRIC CURRENT TO USE IN NEURALGIA.) *Med. and Sur. Reporter.*)

Dr. Rockwell says: "I find the effects of pressure are exceedingly useful. I would not lay it down as a law, but it will be found in the great majority of cases of neuralgia that where firm pressure over the affected nerves *aggravates* the pain, the galvanic current is indicated; while the Faradic current has the greater power to relieve when such pressure does not cause an increase of pain."

Reviews and Book Notices.

Article XVIII.—Cyclopædia of the Practice of Medicine. Edited by Dr. H. Von Ziemssen, Professor of Clinical Medicine in Munich, Bavaria. Vol. XVII. General Anomalies of Nutrition and Poisons. By Prof. Immermann, of Basel; Prof. R. Boehm, of Dorpat; Prof. B. Naunyn, of Königsberg; and Prof. H. Von Bœck, of Munich. Translated by W. Bathurst Woodman, M. D., and J. Burney Yeo, M. D., of London; Edward S. Wood, M. D., of Boston; Charles Emmerson, M. D., of Concord; Porter Farley, M. D., of Rochester; A. Brayton Ball, M. D., and Elwyn Waller, PH. D., of New York. Albert H. Buck, M. D., of New York, Editor of American Edition. New York: Wm. Wood & Co.

The profession is so familiar with the plan and character of this great work that it has come to anticipate before a new volume is finished what it will be, so that a complete review of the volume before us scarcely seems to be demanded here. We are safe in saying that Vol. XVII. will not fail to meet the highest expectations of the profession. If some of the preceding volumes have been more practical than this, none certainly have been more interesting.

The first part of this volume is devoted to general anomalies of nutrition, by Prof. Immermann. Under this heading are considered in an exhaustive and intensely interesting manner, three diseases—hæmophilia or bleeder's disease, scurvy and purpura hæmorrhagica.

Part second, comprising more than two-thirds of the volume, is devoted to poisons.

Poisoning by metalloids, acids, alkalies, earths and their salts,

anæsthetics and other poisonous carbon compounds, and poisoning by tainted articles of diet, is considered by Prof. Boehm.

The article on alcohol poisoning is full and interesting, but alcoholism is not discussed as a distinct disease and no specific is offered for its cure. We were surprised to find that among the remedies for delirium tremens no mention is made of bromide of potassium.

In the discussion of chloroform and ether Prof. Boehm shows a decided preference for the former, as an anæsthetic. He admits that "the published cases of poisoning by ether are very few and bear no comparison at all with the number of cases of poisoning by chloroform. However, this is not so much due to the greater safety of ether, but rather to the fact that while the use of ether has steadily diminished that of chloroform has as constantly increased." We heartily concur in Dr. Edward Curtis' note of criticism where he says, "The enormous clinical experience with ether in America, overwhelmingly disproves the inference made above. There is no escape from the conviction that ether kills so seldom, simply because it is so safe," etc. In the treatment of chloroform or ether poisoning we had thought elevating the feet of the patient of sufficient importance to at least demand notice, but we do not find any mention of it here.

Poisoning by the heavy metals and their salts, including arsenic and phosphorus, is discussed by Prof. Naunyn. Vegetable poisons are considered by Prof. Von Bœck. W. T. M.

ARTICLE XIX. — THE PATHOLOGICAL ANATOMY OF THE EAR. By Herrmann Schwartze, M.D., professor in the University of Halle. With the author's revisions and additions, and with the original illustrations. Translated by J. Orne Green, A.M., M.D., Aural Surgeon, Boston City Hospital, *etc.* Boston: Houghton, Osgood & Co. 1878. Chicago: Jansen, McClurg & Co. 8vo; pp. 174. Price $2.00.

We could not introduce this very interesting book with any better commendation than that of the translator. He says in his preface: "Schwartze's Pathological Anatomy of the Ear" constitutes the sixth part of Kleb's "Handbook of Pathological Anatomy." It is the only comprehensive work strictly devoted to

the pathological anatomy of this organ, and on account of the opportunities and devotion of the author in this special field, his well-known thoroughness and strict impartiality in scientific researches, it is a most valuable addition to the literature of otology. It is essentially a hand-book on the subject of which it treats."

The language is concise and lucid; the text, richly illustrated; the translation, faultless; and paper and press-work are of that excellent quality so characteristic of the productions of American publishers.

We have read the book with great pleasure, and wish it all the success it justly deserves. F. C. H.

ARTICLE XX.—GUY'S HOSPITAL REPORTS. Third series, vol. XXIII. Edited by H. G. Howse, M.S., and Frederick Taylor, M.D.

This volume sustains the reputation of its predecessors. It opens with a paper by Dr. W. A. Brailey, on "Astigmatism in its Relation to Headache and Certain Morbid Conditions of the Eye." He relates fourteen cases showing how the increased effort at accommodation caused various ill effects of such a nature as described in the title, and how they were all relieved by adaptation of proper cylindrical glasses.

Dr. Frederick Taylor, in his illustrated article "On Unilateral Atrophy and Spasm," relates a case of atrophy of one side of the brain, with co-existent atrophy of the other side of the body.

A remarkable feature of the case is that the cerebellum was atrophied on the side opposite to the portion of the cerebrum involved. After some interesting remarks concerning the pathological features of the case, he reports nine cases which had been admitted into the hospital at different times.

Dr. Wilks gives a long account of some unpublished papers left by Dr. Hodgkin. Unfortunately we can not give the detailed summary of many of those which we would like; suffice it to say that they can only increase the admiration of the reader for the broad attainments and truly scientific character of their writer — pioneer as he was in a great field of pathological research.

Dr. Savage contributes a very readable paper on "The Treat-

ment of Insanity, more especially by Drugs." In it he reviews his experience with the cold shower bath, opium, chloral, camphor chloral, succus conii, hyoscyamia, physostigma, purgatives, stimulants, electricity, etc. He makes some excellent points. Among other notes he thinks he has found physostigma of some slight benefit in cases of general paralysis of the insane.

Mr. Higgens gives a short account of some cases of "Tumor of the Orbit," upon which he had operated.

Mr. Cooper Forster, in his essay on "Stricture of the Urethra," enters a plea for general dilatation, even in most severe cases, claiming that divulsion or section are never necessary, and they are always followed by more or less cicatricial shrinkage.

Dr. Taylor follows with "A Contribution to the History of Idiopathic or Pernicious Anæmia," in which he glances at the early literature of the subject, and then gives a collection of twenty-three cases.

Mr. Jacobson furnishes a description of three cases where he followed the method of supracondyloid amputation of the thigh recommended by Gritti and modified by Stokes. The cases were severe, and he was eminently successful in getting rapid recoveries with very useful stumps. Two plates illustrate his article.

Mr. Golding Bird next follows with three "Selected Cases," one trephining for compression, one of charbon, where there was no bacteria found in the blood, and one of hernia of the ovary—the hernia being inguinal, incomplete and indirect.

Dr. Moxon has a paper on "Chronic Intermittent Albuminuria," in which he describes a mild form of the trouble often met with in adolescents, not accompanied by serious symptoms nor followed by any permanent disorder of functionment.

Dr. Goodhart next contributes some notes on "Some Cases of Diastolic Bruit"; and his article is followed by an essay of over sixty pages, from the pen of Mr. Davy, on "Antiseptic Surgery and Pyæmia." This, as may be surmised, is a plea for the Lister method of dressing; but more than this, the commentary on the five cases reported is excellent, and displays commendable research and reflection. Mr. Lucas contributes notes on the "Termination of a Case of Fracture of the Skull," which he partially

reported in Vol. XXI for 1876. This will be read with interest by those who saw his earlier report.

"A Report on Cases of Tetanus treated in Guy's" is the title of the final paper by Dr. Taylor. He reports fifty-one cases treated by one or more of the following: aconite, atropia, bromides (ammonium and potassium), calabar bean, cannabis indica, conium, potassic iodide, nicotine, amyl nitrite and quinia. Of the fifty-one, eight recovered, but it would be difficult to select any one remedy of those mentioned as superior to the rest, judging from the reports, on the whole, though, calabar bean and chloral seem to have given the best results.

Statistical tables, honor lists, etc., close this volume, which no one can read without profit, and which bears out the high reputation that these reports have always borne. R. P.

ARTICLE XXI.—TRANSACTIONS OF THE PHILADELPHIA PATHOLOGICAL SOCIETY. VOL. VII. Edited by J. H. C. Simes. Philadelphia: J. B. Lippincott & Co.

This neat volume of one hundred and seventy pages, comprises about seventy-five articles, being either reports of cases or pathological reports of committees concerning morbid specimens. Interesting points made during the discussion of these cases are also brought out. The volume contains nothing irrelevant—the cases reported are all worthy of record, and the histological reports are concise and models in their way. To notice the articles, even briefly, would be to reproduce much of the volume. Among them, however, we especially noticed "Cases of Injury to the Skull," by Dr. Ashhurst; "Caries of the Sacrum and Trochanter Major," by Dr. H. L. Hodge; "Abdominal Cancer, Obstruction and Double Uterus," by Dr. Starr; "Pancreatic Induration, resembling Scirrhus and Membranous Enteritis with Intestinal Casts," by Dr. Willard; "Embolic Pneumonia," by Dr. Nancrede; "Interstitial Nephritis," by Dr. Hutchinson; "Cases of Extra-uterine Pregnancy," by Drs. Henry and Pepper, with plates illustrating the articles; "Elephantiasis of the Penis," by Dr. Shakespeare; "Anatomy of the Cerebrum," by Dr. Allen; "Cerebral Abscess and Dilated Bronchi," by Dr. Hutchinson; "A Needle found, Post-mortem, within the Cranium," by Dr. Hodge; and the final paper

by Dr. Nancrede, on "The Causative Relation Existing between the Anatomical Arrangement of Tissues at Various Ages, and their morbid Growths," a very instructive and readable resumé of the etiology of cancer. R. P.

ARTICLE XXII. — PHYSIOLOGY. PRELIMINARY COURSE LECTURES. By James T. Whittaker, M.A., M.D. Illustrated. Cloth. Pp. 288. Cincinnati: Chancy & Murray. 1879.

This little work was published at the request of many of the author's students, and we do not wonder at the request. As one would infer from the subject, the author does not pretend to give an exhaustive account of the extensive field of physiology, but he does what is equally essential: he inspires his readers with the enthusiasm with which he himself is inspired. He takes up the prominently interesting parts of physiology as a man passionately fond of and well acquainted with children, will take them up and talk to them and about them. The book will be of great interest to the student, and a pleasant recreation to the active practitioner. R. T.

ARTICLE XXIII.—HANDBOOK OF NURSING FOR FAMILY AND GENERAL USE. Published under the direction of the Connecticut Training School for Nurses, State Hospital, New Haven. Philadelphia: J. B. Lippincott & Co. Chicago: Jansen, McClurg & Co. 8vo., pp. 266; price $1.25.

This book was originally intended for use at the school for nurses in the State Hospital at New Haven, Connecticut. But the directors of that school will have no occasion for regret that they allowed the book to be made accessible to everybody. It will do much toward the comfort of the many sick who cannot have the care of a trained nurse; for it teaches, in simple language, every woman how her tenderness must be guided by intelligence and knowledge in rightly performing the duties of a nurse. The rules and instructions laid down in this book are comprehensive and practical. The book gives evidence throughout of being the result of the experience of many years, and will prove a desirable addition to every domestic library.

BOOKS AND PAMPHLETS RECEIVED.

The Prophylaxis of Puerperal Convulsions. By E. S. Dunster, M.D. Reprint from Toledo *Medical and Surgical Journal.*

Fourth Annual Report of the Officers and Superintendent of the Asylum at Walnut Hill, Hartford, Connecticut, at their Annual Meeting, Oct. 9, 1875. Also a Petition to Legislature. Hartford, 1878.

Two Lectures on Lister's Antiseptic Method of Treating Surgical Injuries. By J. M. Little, M.D. One of the Series of American Lectures, edited by E. C. Seguin, M.D. New York: Putnam & Sons, 1878.

The Diagnosis of Progressive Locomotor Ataxia. By E. C. Seguin, M.D. One of the Series of American Clinical Lectures, edited by E. C. Seguin, M.D.

Conspectus of Organic Materia Medica and Pharmacal Botany, Comprising the Vegetable and Animal Drugs; their Physical Character, Geographical Origin. Classification, Constituents, Doses, Adulterations, etc. Table of the Tests and Solubilities of the Alkaloids appended By L E. Sayre, Ph. G. Cloth, pp. 220; 1879. Philadelphia: D. G Brinton.

Differential Diagnosis: A Manual of the Comparative Semeiology of the More Important Diseases. By F. D. H Hall, M.D. American Edition with Extensive Additions. Philadelphia: D. G. Brinton. 1879.

Diseases of the Abdomen. Comprising those of the Stomach and Other parts of the Alimentary Canal, Œsophagus, Cœcum, Intestines and Peritoneum. By S. O. Habershon M.D, London. Third Edition, Considerably Enlarged and Revised. Cloth, pp. 706 1878. Philadelphia: Lindsay & Blakiston.

Science and Practice of Surgery. Including Special Chapters by Different Authors. By F. J. Gant, F.R C.S. Second Edition in two Volumes; cloth. 1878. Philadelphia: Lindsay & Blakiston.

Physiology: Preliminary Course of Lectures. By James T. Whittaker, M.A., M.D. Illustrated. Cloth, pp. 288. 1879. Cincinnati: Robert Clarke & Co.

Atlas of Human Anatomy. Illustrating most of the Ordinary Dissections and Many not usually Practiced by the Student, Accompanied by an Explanatory Text. By Richmond John Godlee, M.S., F.R.C.S. Part I. 1878. Paper covers. Philadelphia: Lindsay & Blakiston.

St. Bartholomew's Hospital Reports. Edited by W. S Church, M.D., and Alfred Willett, F.R.C.S. Volume XIV. 1878. London: Smith, Elder & Co.

Transactions of the Medical Society of the State of Pennsylvania at the 28th Annual Session. Held at Pittsburgh, May, 1878. Volume XII.

The Value of Absent Tendon-Reflex as a Diagnostic Sign in Locomotor Ataxia, with an Analysis of Eight Cases. By A. McLane Hamilton. Reprint from *Boston Medical and Surgical Journal.*

Fifty Years Ago. An Address to the Graduating Class of the Medical College of the Pacific for 1878. By H. Gibbons, M.D.

Report of the Quebec Lunatic Asylum for 1876–7.

On a New Modification of the Anterior Splint. By Roswell A. Park, M.D. Reprint from the Transactions of the Illinois State Medical Society, 1878.

Microscopes of the Centennial Exhibition. By J. S. Hunt, M.D.

Sugar Frauds and the Tariff. By H. G. Brown. 1879.

Optic Neuritis with Notes of Three Cases. By C. J. Lundy, M.D. Reprint from *Detroit Lancet*, Dec., 1878.

Brief and Argument for Appellant. N. J. Aiken vs. J. W. Rauch et al.

Annual Report of Pennsylvania Free Dispensary for Skin Diseases.

Artificial Feeding of Infants. By A. Clendinen.

The Testimony of Medical Experts. By W. H. Philips, M.D.

A Case of Acute Puerperal Inversion of the Uterus. By J. Byrne, M.D. Reprint from the *New York Medical Journal*, Oct. and Dec., 1878.

Provision for Insane Criminals. By R. S. Dewey, M.D. Reprint from *Journal of Nervous and Mental Diseases*, Oct., 1878.

Third Bi-Ennial Report of Trustees, Superintendent and Treasurer, of the Illinois Southern Hospital for the Insane, at Anna.

THE first number of the first volume of the *St. Louis Courier of Medicine and Collateral Sciences* is at hand — a handsome octavo of 120 pages, with a wood-cut of John Hunter upon the cover.

We have not so far chronicled the appearance of every new mushroom in the field of medical periodical literature, simply because we had better business in hand. We are pleased, however, to make an exception of the journal named above, for two reasons: first, because it is exceptionally good; second, because it is published by the Medical Journal Association of Missouri, an incorporated body of physicians corresponding precisely to the Chicago Medical Press Association. We gladly recognize this publication as own sister of the CHICAGO MEDICAL JOURNAL AND EXAMINER, and wish it long life and prosperity.

Summary.

Collaborators:

DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY, DR. D. R. BROWER.

SURGERY.

WOUND OF PLEURA AND LUNG TISSUE—LAPAROTOMY TO REDUCE HERNIA. (*Journal de Médecine et de Chirurgie pratiques.*) Hôpital de Bicêtre. Service de M. le Docteur F. Terrier.

X, aged 65, in a struggle received a knife wound in the third intercostal space external to the mamary glands. No pain was experienced at the moment when the wound was inflicted, the man not being conscious of the state until he saw the blood.

On examination he was found to be breathing through the wound. This was demonstrated by a prolonged whistling sound perceived at each respiration, and at each expiration by the flow of arterial blood mixed with large bubbles of air. The wound was two and one-half centimeters in length, and somewhat ragged. The bronchial tubes could not have been much wounded because he vomited no blood, whilst a pulmonary vessel must have been severed in order to account for the effusion of blood, which rapidly attained its maximum and suddenly stopped. The hæmorrhage is supposed to have ceased when the blood filled the pleural cavity to the level of the pleural pulmonary wound. At this moment the wound was closed by sutures and healed by first intention without any untoward symptom. The wound was received on the 15th of June, and the man left the hospital on the 9th of July.

Laparotomy.—X., 63 years of age, had been troubled for twenty years with an inguinal hernia, which was easily replaced.

It was replaced on the 9th of December, but from this date the usual symptoms of intestinal obstruction set in and persisted, notwithstanding all the remedies employed. M. Terrier, supposing there was an internal hernia or invagination which he could not locate, determined to open the abdomen in the median line. At the final examination previous to the operation there was perceived a spot less yielding than the adjacent parts. This was supposed to be the seat of constriction. After making an incision immediately below the umbilicus, eight centimeters in length, and after the opening of the peritoneum, there was found an hernia situated in the anterior abdominal wall where the unyielding spot was discovered. Reduction being effected, the wound was closed and completely healed in ten days. It is thus being daily demonstrated that the wounding of the serous membranes is not necessarily attended with so much danger as was formerly supposed.

PATHOLOGY.

THE POISON OF SYPHILIS.—Klebs. (*Centralbl. f. Chir.* No. 50, 1878.)

At the last congress of German naturalists, Klebs detailed his experiments made to detect the nature of syphilitic poison. If pieces of a Hunterian chancre are placed into a solution of gelatine, a vegetation of fungi is speedily observed. This consists of minute rods, at first of lively mobility, which array themselves subsequently in oval masses. The cultivation of this fungus was continued by transferring some germs into fresh solutions of gelatine. Small quantities of this turbid fluid were placed underneath the skin of a monkey. After six weeks the animal suffered from indurated ulcers in the mouth of a decidedly syphilitic appearance. The autopsy revealed, besides, syphilitic alterations of the dura mater and of the lungs. In another monkey similar syphilitic appearances were caused by direct inoculation with a portion of a Hunterian chancre. Different tissues and especially the blood of these animals placed into solutions of gelatine gave rise again to the above described fungus. Klebs here claims, that this fungi constitute the syphilitic virus, and proposes to call them helico-monads.

Obituary.

ABSTRACT OF A MEMORIAL ADDRESS by Dr. Frederick Andros, delivered before the Northern Iowa Medical Association, Dec. 4, 1878, on the decease of the late DR. JOHN LINTON.

Dr. Linton was born in Breckenridge county, Kentucky, October 5th, 1811. When near his majority he apprenticed himself to a tanner and currier. After perfecting himself in his trade, he left the home of his nativity to seek his fortune in the wilds of the west. In the spring of 1837, he arrived at Prairie du Chien. Here he was employed by the Indian department, filling an important position, until 1842. He then returned to his native State and commenced the study of medicine under the tuition of Dr. Pollard, one of the prominent physicians of Kentucky. In the fall and winter of 1844 he attended medical lectures at the St. Louis University, where he was graduated. In the spring of 1846 he came to Garnavillo, in Clayton county, where he commenced the practice of his profession, and where he remained until his death.

His private life may be thrown freely open to the world, and challenge its closest scrutiny with a consciousness on the part of the critic that there is no blot to be concealed and no glaring fault which a love of truth bids him deny. Here was a man in whose professional or public life there can be found no instance of a mean or equivocating action, none of a departure from the self-imposed restraints of a lofty and refined sense of honor. He trod for thirty-two years the difficult and devious paths to professional preferment and success, and yet kept his robes unsullied by the mire that so often polutes those ways. Though lacking the advantages of a classical education, his life was an instance in which trne greatness was achieved without the aid of

those brilliant qualities whose rare assemblage the world calls genius, but he possessed what is far better, a sound judgment and a resolute purpose to pursue the right and gather wisdom from experience. He had none of that presumptuous confidence in himself which so often misleads its possessor, and which, though dangerous, is still a commanding quality, yet he knew how to inspire the people with a just confidence in the soundness of his judgment and the integrity of his purpose, so as to be looked up to as a man in whom there was safety. But few men have lived among us whose lives have been as long and as active as his, who have secured more lasting friends (and none, I am sure, ever left fewer enemies). Nor was he one of those cold and impassive characters who shed their light without heat; its kindly influence, with a genial and friendly warmth was felt within whatever circle he might move. That man who, dying, can be said to have passed his days without a stain upon his reputation, has justly earned the honors due to a well spent life. Although he has passed from us forever, a fragrance still lingers around his memory, exhaled from the clustering virtues which beautified his character while living.

A sudden cold and over-exertion superinduced the disease which skill failed to alleviate, and on the 27th day of June last, his noble spirit winged its way to the country which we know not of. His religion was embraced in living up to the Golden Rule. The doctor was a firm and sincere believer in an overruling Providence, a Supreme Ruler of the universe, a God of love and mercy. Here was an example of the great truth that life, like the sword of Damocles, is suspended by a hair. May our lives be so ordered that when the great change shall come, our last hours like his may be peaceful and without doubt or fear when crossing the threshold of the unknown future.

THE FOLLOWING PREAMBLE and resolutions referring to the late A. W. LUECK, M.D., were passed at the last meeting of the Rock River Medical Society, at Fond du Lac, Wis., Jan. 8, 1879:

WHEREAS, We have learned with sincere sorrow, that death has removed from our midst our late esteemed friend and member, Dr. A. W. Lueck, of Maysville, Wis. Therefore

Resolved, That while we bow submissively to Him who doeth all things well, we yet sincerely deplore the early death of him whom we had learned to appreciate and love for his pure and noble character, and his unselfish devotion to the cause of science and suffering humanity.

Resolved, That his professional enthusiasm and success have afforded us unmistakable evidence of his fitness for the profession of his choice, and that his example is worthy of personal emulation by us all.

Resolved, That we shall ever hold him in remembrance for his genial social qualities, his unfeigned modesty and nobility of soul, and his professional integrity.

Resolved, That our earnest sympathy be extended to his sorrowing family, upon whom this severe affliction has fallen; may they feel the tender care of the hand that has wounded but to heal, and be cheered by the thought that the life that has gone out so early in darkness, has even now entered upon an endless existence of joy.

Resolved, That the secretary be instructed to forward a copy of these resolutions to the friends of the deceased, and to the local papers, and the CHICAGO MEDICAL JOURNAL AND EXAMINER and to the *Medical and Surgical Reporter*.

N. SENN,
H. P. WENZEL,
E. J. SMITH,
} *Committee.*

HENRY P. WENZEL, M.D.,
Sec'y *Pro tem.*

HURESA, WIS., Jan. 9, 1879.

THE METRIC SYSTEM IN ENGLAND.—The *British Medical Journal*, which is well known as the official journal of the British Medical Association, announces in its issue of Dec. 21, 1878, that it has applied to the American Metric Bureau for an explanation of the metric system, and prints two columns full of information derived from that source. We commend the enterprise of our cotemporary, but cannot repress the suspicion that he travelled a great distance in order to obtain his knowledge.

Said Dr. John Bull, of Great Britain—
"With the French Metric System h'I'm smitten;
To the Yankees h'I'll go
For to find h'out, y' know,
'Ow the same by the Frenchmen h'is written!"

THE METRIC SYSTEM.

The Metric System and the Centigrade Scale have been exclusively employed in this journal since the beginning of Vol. XXXVII, July, 1878. This system, extensively or exclusively used by many other nations, is legalized in the United States, Great Britain, France, Germany, Russia and Sweden, and has thus become an essential part of the international language of science. It is recommended for adoption in this country by the American Medical Association and other scientific bodies; and is used exclusively by the United States Government in the Marine Hospital Service. To-day no physician can afford to be ignorant of its value, its simplicity and the meaning of its terms.

The subjoined tables and scales, prepared by Prof. W. S. Haines, are regularly reproduced in this journal, for the convenience of readers and correspondents.

METRIC MEASURES OF LENGTH.

Millimeter.....	0.001 of a Meter.		0.03937 in.
Centimeter.....	0.01 " "		0.39370 "
Decimeter	0.1 " "		3.93707 "
Meter	**1.**	**Meter**.....	**39.37079** "
Decameter.....	10.	Meters	393.70790 "
Hectometer.....	100.	"	3937.07900 "
Kilometer .....1000.		"	39370.79000 "

METRICAL WEIGHTS.

Milligram.....	0.001 of a Gram.....		0.015 gr.
Centigram	0.01 " "		0.154 "
Decigram.....	0.1 " "		1.543 "
Gram.....	**1.**	**Gram**.....	**15.432** "
Decagram.....	10.	Grams.....	154.323 "
Hectogram.....	100.	"	1543.234 "
Kilogram .....1000.		"	15432.348 "

☞ The United States "nickel" five cent piece weighs five grams, and is two centimeters in diameter.

APPROXIMATE EQUIVALENT OF METRICAL WEIGHTS.

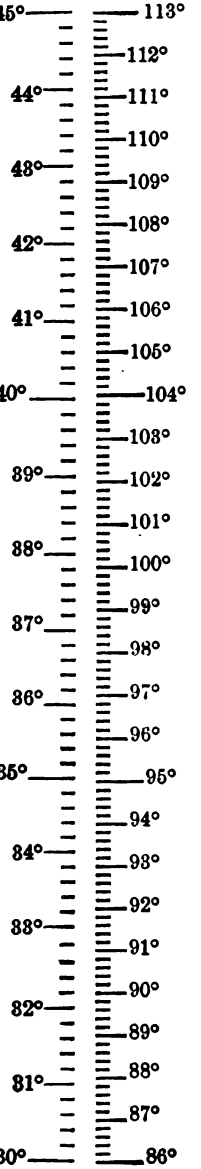
For Rapid Reference.

Milligrams.	*Grains.*	*Decigrams.*	*Grains.*
1 (written 0.001 or |001)*...	1/65	1 (written 0.1 or |1).....	1 1/2
2.....	1/32	2	3
3.....	1/22	3	4 1/2
4	1/16	4	6
5.....	1/13	5	7 1/2
6.....	1/11	6	9
7.....	1/9	7	11
8.....	1/8	8	12 1/2
9.....	1/7	9	14

* The decimal *line* instead of points makes errors impossible.

Centigrams.	*Grains.*	*Grams.*	*Grains.*
1 (written 0.01 or |01).	1/6	1 (written 1. or 1|)	15
2	1/3	2	30
3	6/12	3	46
4	7/11	4	61
5	3/4	5	77
6	9/10	6	92
7	1	7	108
8	1 1/4	8	123
9	1 1/2	9	139

A Kilogram—2 1/5 lbs. Avoirdupois.



METRIC FLUID MEASURES.

When using the metric system, fluids are preferably prescribed by weight, employing the gram, its multiples and subdivisions, just the same as with solids, thus avoiding the errors due to refraction, adhesion, and inaccurate measuring vessels. For practical purposes four grams of water may be regarded as equivalent to a fluid drachm of that liquid, and the same may be considered true of tinctures and infusions; syrups, on the average, are about one-third heavier than water, so that a fluid ounce of a syrup will be approximately represented by 43 grams. If preferred, however, fluids may be prescribed by volume in the metric, just as in the present system, using for that purpose the *Cubic Centimeter*, that is, a volume represented by a cube all of whose sides measure one centimeter. An ordinary back-gammon die is usually about this size. One cubic centimeter (written 1 C. C.) — 16.231 minims. It is approximately regarded as one fourth of a fluid drachm.

APPROXIMATE EQUIVALENTS OF CUBIC CENTIMETER.

0.001 C. C.	—	1/66	minim.
0.01 "	—	1/6	"
0.1 "	—	1 1/2	"
1. C. C.	—	**15**	**minims.**
4. "	—	1	fluid drachm.
16. "	—	4	fluid drachms.
32. "	—	1	ounce.

1000 C. C. (usually known as a **Liter**) is a trifle more than one quart, wine measure.

The following prescription—

℞: Potassii bromidi.....ʒi.
Elixir aurantii.....fl. ʒviij.
Mix.

would, in metric terms, be written:

Potassic bromide.....	32	Gm.
Orange elixir.....	250	C. C.

Mix.

Or, in a more finished decimal manner:

Potassic bromide.....	30	Gm.
Orange elixir.....	250	C. C.

Mix.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Feb. 10 and 24.
West Chicago Medical Society—Mondays, Feb. 3 and 17.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.
Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Dr. Hyde; 3 p. m., Medical, by Dr. Bridge.
Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.
Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.
Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman; 4 p. m., Diseases of the Chest, by Prof. Ross.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.
Woman's Medical College—11 a. m., Ophthalmological, by Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.

THE

CHICAGO MEDICAL

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VOL. XXXVIII.—MARCH, 1879.—NO. 3.

[In these pages dimension and weight are expressed in terms of the Metric System, and temperature in degrees of the Centigrade Scale.]

Original Communications.

ARTICLE I.

PUERPERAL LACERATION OF THE CERVIX UTERI, AND THE OPERATION OF TRACHELORRHAPHY * AS A MEANS OF CURE.

By E. C. DUDLEY, M.D., Chicago, formerly House Surgeon to the Woman's Hospital in the State of N. Y. Read before the Chicago Gynæcological Society, Jan. 31, 1879.

The two memoirs of Emmet † contain about all that is known of laceration of the cervix. Breisky,‡ of Prague, and Rokitansky, Jr.,§ of Vienna, have reported a number of successful cases. Breisky gives to Emmet the entire credit of having established the pathological significance and treatment of this lesion, but says that W. Roser,‖ in 1861, described the same condition under the

* "This term was first employed (to my knowledge) by Dr. E. C. Dudley, now of Chicago, in a paper published in the *N Y. Medical Journal* for January, 1878, and is derived from τράχηλος, neck, and ῥαφή, seam. I have adopted it because I think so important an operation should have a distinctive name of its own, and for convenience sake."—Mundé, in *Am. Jour. Obstr.*, January, 1879.

† *Am. Jour. of Obstetrics*, Nov, 1874. *Am. Practitioner*, Jan., 1877.

‡ *Wiener Med. Wochenschr.*, 1876.

§ *Wiener Medizinischer Presse*, July, 1876.

‖ W. ROSER, *Archiv. für Heilkunde*, II., 1861.s.97.

name cicatricial ectropion of the cervix. The name cicatricial ectropion, formulated by Roser, involves a contradiction, for the presence of cicatricial tissue about the os could not cause ectropion or eversion, but by its tendency to contraction would have the opposite effect if any. Howitz,* of Copenhagen, with an experience of seventy-six cases, pronounces unqualifiedly for laceration as the essential cause of eversion, erosion, cystic degeneration and subinvolution, and for Emmet's operation as the only means of cure. A few other contributions in Germany† and America‡ have appeared merely as endorsements of the memoirs of Emmet. These have been designed not to be original, but to awaken the profession to the immense importance of the subject.

Either from absolute ignorance, or from profound prejudice, or from a carelessness which in the law would amount to malice, the most exhaustive gynæcological works in England,§ France‖ and Germany¶ are absolutely silent. No published opposition, however, has appeared, perhaps because every man who has made investigation enough to warrant him in writing his experience, has been converted.

In the excellent paper of Mundé**, illustrated by twelve elegant and much needed lithographic plates, mention is made of Gardner's †† work on sterility, published in 1856, in which he finds that this author "repeatedly speaks of '*laceration of the cervix*' as productive of ulceration, hypertrophy of the cervix, endo-cervicitis and sterility," but points to no special means of diagnosis or operative treatment. This work contained two colored plates, in illustration of "fissure of the os," and "ulceration."

History and Pathology.—When we remember that the external os of the non-pregnant uterus has a diameter of about one-fifth of an inch, and that this diameter must be increased at term to

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* Gynäcologiske og Obstetriciske Meddelelser, V.I., No. 3, 1878.

† Ruge and Veit Zeitschrift f. Geburtsh. u. Gynäkologie II., 1878.

‡ Wing, *Boston Med. and Surg. Jour.*, March, 1876. Baker, *Boston Med. and Surg. Jour.* Sept., 1877. Dudley, *N. Y. Med. Jour.*, Jan. 1878. Dudley. *Am. Jour. Ob.*, Oct., 1878. Harrison *Va. Med. Monthly*, Dec., 1874. Chase, Transactions of N. Y. S. Med. Society, Jan., 1878. Goodell, Transac. Med. Soc. State Pa., May, 1878. Mundé, *Am. Jour. Ob.*, Jan., 1879.

§ Barnes.

‖ Lebold.

¶ Hegar, Kaltenbach, Schroeder.

** *Am. Jour. Obstetrics*, Jan., 1879.

†† The Causes and Treatment of Sterility, etc., by A. K. Gardner, A.M., M.D., N. Y., 1856.

the diameter of the child's head, we may readily suppose laceration of the cervix to be a common accident. It is now a recognized fact that some degree of laceration attends the majority of labors. This lesion is generally slight, and heals so readily that it is of little or no pathological significance. In lacerations through the anterior and posterior lips healing is the rule; this, Emmet says, is due to pressure of the lateral vaginal walls, which keep the "raw surfaces in close contact until they have firmly united."

Anterior laceration may extend so far as to invade the bladder, and make a vesico-utero-vaginal fistula, but even then healing often follows spontaneously, if attention be paid to cleanliness and position, leaving nothing to mark the laceration save a small vesico-vaginal fistula at the utero-vaginal attachment, or a utero-vesical fistula at the angle or bottom of the laceration, extending from this part of the cervical canal into the bladder. I have seen two cases of utero-vesical fistula due to this cause, in which healing had gone so far as to occlude the external os uteri. The menstrual blood in these cases passed away through the urethra.

Posterior laceration extending into the vaginal cul-de-sac may by creating cellulitis give rise to contracting cicatricial bands and effused lymph, and these may draw the uterus downward and backward, and fix it there in an almost incurable retroversion; permanent sterility in these cases is inevitable, and is doubtless due, in part at least, to obliteration of nature's reservoir for seminal fluid, the vaginal cul-de-sac.

In lateral lacerations, nature, instead of repairing the injury, resorts to a deception so artful that this lesion had been practically an unknown factor in uterine pathology until exposed by Emmet, in 1862. I refer to the substitution for the normal cervix of an apparently genuine * cervix, composed of everted intra-uterine and reflected vaginal tissue; a deception so complete that it sometimes fails to be detected even by the practiced eye. Indeed, if the differential diagnosis between normal and lacerated cervix were dependent solely upon ocular examination, cases would commonly arise in which increased size, congestion and a so-called "ulcer," would be the only differential signs. The formation of

*The false cervix here referred to includes only the vaginal portion of the entire cervix uteri.

this false cervix is indicated in the papers of Emmet, and what I shall add will only tend to corroborate his already established views.

Some of you will recall a paper by Dr. John Bartlett,* of Chicago, on the cervix before, during and after labor. The facts upon which Dr. Bartlett based his conclusions are entirely accessible, and are verified by the plates of Wilh. Braune,† of Leipzig, drawn from sections of the frozen gravid uterus. These conclusions which I introduce on the authority of Dr. Bartlett, harmonize with the history of lacerated cervix; they are, that from the moment of pregnancy the cervix as well as the body of the uterus enlarges to accommodate the growing fœtus, that the entire cervix from the first expands symmetrically with the body above, except a small portion which surrounds the external os; that this expansion very early in pregnancy obliterates the internal os, and converts the entire cervix into an inverted dome, which projects into the vagina, and whose walls are continuous with those of the body above. So that long before term a very large portion of the fœtal envelope is composed of evolved and expanded cervical tissue. Now, during labor there must be some point in this cervix above which all the tissues contract for the child's expulsion and below which they dilate for its exit. After delivery, examination shows, at a point above the normal site of the external os, about on a level with or a little below the plane of the utero-vaginal junction, the familiar, hard, unyielding ring vaguely called the os, regarded by Bartlett as the internal os, which seems impossible, since its location is at or below the vaginal junction, while that of the internal is considerably above. Neither can it be the external os, since its location is too high; it must, therefore, be between the two, at the very point just mentioned, above which contraction and below which dilatation occur in labor. It is, therefore, a temporary intra-cervical os, below which we must look for all that part of the cervix which during labor was compelled to undergo excessive dilatation, and expect there to find laceration, if it be present. Now, without great care, this portion of the cervix, which has been so stretched that it cannot

* *Chicago Med. Jour.*, Oct., 1873.

† Atlas of Topographical Anatomy, translated by Belamy, Philad., 1877.

immediately recover its contractile power, will be entirely overlooked, but it is always to be felt projecting into the vagina as a "flabby floating collar," not unlike "a section of large intestine," and as destitute of contractile power as the sphincter ani muscle after extreme forcible dilatation by the method of Van Buren; it is usually one or two inches in depth, and so deceptive to the touch that Dr. Bartlett, as he assures me, has often attempted to remove it by the finger for a clot of blood. After normal labor this slowly recovers its contractile power, and in a few days resumes its normal shape, and the external os is thereby restored.

But if bilateral laceration occur, nature has all the conditions for the formation of the false cervix already mentioned. The diverging flaps, as Emmet says, are at once forced in the directions offering least resistance, the posterior catching on the recto-vaginal wall and crowding backward into the vaginal cul-de-sac and the anterior forward in the axis of the vagina. The congested tissues about the temporary os, which we have called intra-cervical, meeting no resistance, now roll out, and this eversion, by obstruction to the circulation, causes the tissues to become so gorged with blood that they no longer have sufficient space for their accommodation within the uterus, and the eversion continues until tissue enough for the formation of a spurious cervix has been rolled out into the vagina, and until the temporary intra-cervical os has actually usurped the place of the normal os externum, which had been destroyed. When the patient assumes the upright position, all these distortions are exaggerated. Then the congested uterus by its weight settles lower in the pelvis and carries with it a reflected fold of the vaginal membrane, and the cervix is thus made to appear longer than it actually is. This deception may be exposed by placing the patient in the knee-chest position, when the uterus by its own weight will be carried towards the diaphragm, and the consequent unfolding of vaginal membrane will disclose the true utero-vaginal attachment, and not uncommonly expose a deep laceration on either side, which in the ordinary examination had been overlooked. The rolled out intra-uterine tissue of which the false cervix is composed, and the remains of the lacerated lips of the genuine

cervix during involution, are so soft and easily molded that, resting in their prolapse upon the floor of the pelvis, they may gradually take the form of normal cervix, and the temporary intra-cervical os, which has usurped the place of the normal os externum, may appear at the very crown of this new cervix as a slit, perhaps not more than one-fourth inch long, the only remnant of a rent extending often an inch or more into the vaginal tissues on each side.

When the laceration is confined to one side, the deception is even greater, for, as shown by Emmet, the fundus in such cases is usually drawn towards the affected side by inflammatory contraction of the nearest broad ligament, the seat of a former cellulitis, which is a common result of laceration. The effect of this latero-version is to raise the uninjured side of the cervix a trifle higher in the pelvis and correspondingly to depress the injured side, thereby causing a reflection of the vaginal membrane on the depressed side, so that as in the bilateral injury the apparent os externum may seem to be in the very centre of the cervix when it is on the side, and to add to the confusion the sound entering at the side may, by passing to the horn of the opposite side of the uterus, appear to pass in the median line.

That laceration of the cervix causes marked outrolling of intra-uterine tissue, and a consequent permanent, passive congestion, is established beyond all question. The delicate intra-uterine membrane is then in contact with the irritating acid secretion of the vagina, instead of the milder alkaline secretion of the uterus to which it is accustomed. But the mischief does not end here. The uterine supports soon prove unequal to the work of sustaining in position the uterus, now heavy from congestion, and it falls lower in the pelvis, where it remains generally in some form of version. The everted membrane, in contact with the posterior vaginal wall, is subject to the additional irritation of friction, an erosion or "ulceration" forms, and the mucous follicles, estimated by Tyler Smith * to number ten thousand in a normal virgin cervix, become diseased, and some of them pour out the familiar thick, colorless, viscid, ropy

* On Leucorrhœa, Am. Ed., page 38.

secretion, while others, their outlets having been occluded, become distended by their own secretion, and undergo cystic degeneration. I recall one case in which I must have emptied, by puncture with the Buttle's lance, hundreds of these little cysts in the treatment preparatory to operation. These cysts are generally present, and frequently in large numbers.

The uterine prolapse, in the words of Emmet, causes the broad ligaments to be "put upon the stretch," and by the consequent obstruction in the channels of blood and nerve supply which traverse these ligaments, we have additional cause of congestion and faulty innervation. Dr. Thomas* lays down the three following abnormal developments in the uterus as the basis of uterine pathology:

FIRST. *Disorders in innervation and circulation.*

SECOND. *Change in quantity of connective or muscular tissue.*

THIRD. *Change in position.*

He adds that either of these three being the primary lesion, the other two, singly or combined, may be its consequences. The first and third we already have; the second is their inevitable result.

Diagnosis and Treatment.—Laceration of the cervix, until demonstrated by Emmet, was known only by its effects, and accordingly the following names were applied to designate their extent and character: "erosion," "excoriation," "granular erosion," "ulcer," "papillary erosion." These erosions, when exaggerated, were called cock's-comb granulations, or cauliflower growths, a condition simulating malignant disease, and when the cervical follicles were involved, follicular ulcer. In general "ulceration" became the popular and fashionable diagnosis. Even now, after seventeen years of demonstration to the contrary, the entire profession of Europe except a few Germans, and a large majority in America, fully asleep to the vast importance of Emmet's discovery, continue to mistake the cause for the effect, and treat the symptoms instead of the lesion itself. Never was a false theological dogma more thoroughly ground into a credulous people than this unfortunate though patent delusion of ulceration is now ground into the intel-

* Diseases of Women, page 208.

ligent medical profession. Except in specific disease, genuine ulceration is rarely if ever found on the cervix. Thomas* apologises for using the word, and says that "what is called ulceration on the cervix is called granular degeneration when it occurs under the lids."

When a case of uterine disease following parturition comes with a previous diagnosis of "ulceration or erosion with cervical enlargement and patulous os," we merely have to translate these words nto laceration of the cervix, and the diagnosis is correctly made. True, the "ulceration or erosion" is present, but that is a *fact*, not a *diagnosis*.

There is a form of erosion solely dependent upon an irritating discharge from the endometrium or vagina, apt to occur in feeble and badly nourished subjects, and not very uncommon in virgins; a condition analogous to the familiar erosion and excoriation produced by prolonged nasal discharges on the upper lips of children. Such an erosion is readily distinguished from that of laceration by the absence of eversion, absence of marked cervical enlargement, by the presence of a normally shaped os externum, and by physical examination soon to be described. It may be cured by removing the cause. It is generally associated with laceration, and when associated its treatment should be insisted upon as preparatory to the operation.

The presence of cystic degeneration of the mucous follicles of the external cervix, I believe to be pathognomic of laceration. These little cysts (already mentioned) feel to the touch like small shot scattered over the submucous tissues of the everted cervix. I have looked for them in hundreds of cases of uterine disease, but have never found one except on the lacerated cervix. My clinical experience also harmonizes with the histology of the intracervical membrane, as given by Stricker and Frey.

† "Lodged in the substance of these ridges (rugae cervicis), *excepting only in the lower and smoother part of the cervical canal*, we discover the so-called mucous follicles of the cervix."

‡ "Not unfrequently these little pits (mucous follicles) become occluded,

* Diseases of Women, page 303.

† Stricker's Manual of Histology, Am. ed., page 614.

‡ Frey's Histology and Histo-chemistry of Man, Am. ed., page 548.

and in consequence distended with mucus. They then present themselves in the form of small round vessels, known as the ovula nabothi."

* "These bodies (the ovula nabothi) are even found on the outer surface of the vaginal portion of the uterus."

If these follicles are normally found only within the cervical canal, it is clear that their presence in contact with the vaginal membrane must depend upon eversion, which I think never occurs to the extent of exposing the rugæ, except as the result of laceration, or of some other decided mechanical injury. Stricker finds the cysts or "ovula nabothi" "on the outer surface of the vaginal portion of the uterus," and concludes that they are distinct anatomical elements, although identical in structure, while Frey declares that the ovula nabothi are simply occluded mucous follicles, which Stricker says do not exist on "the outer surface." I therefore cannot escape the suspicion that the investigations of Stricker's "ovula nabothi" were made on the lacerated and everted cervix, not upon the virgin cervix.

The presence of the lesion may be detected in ordinary cases by the touch, but for the intelligent study of all cases, and for diagnosis in the more obscure, additional exploration is essential. The most reliable means are two uterine tenacula and Sims' speculum. The tenacula are absolutely essential, and I am fully convinced that their importance is not appreciated by many who, neglecting their use, not only fail in diagnosis, but question the accuracy of others who succeed. With these instruments, Emmet first untied the knot and revolutionized almost the entire pathology and treatment of cervical disease. The late Dr. Peaslee,† in his remarks on this subject before the N. Y. Co. Med. Soc., referring to the large number of cases of so-called ulceration, says "that they were not recognized, for none of us knew anything about them till Dr. Emmet told us. It was he who, in a happy moment, brought the anterior and posterior surfaces together with tenacula, and instantly demonstrated that what we all supposed an ulceration was nothing more or less than a laceration."

I quote the following from Dr. Emmet's first paper, published

* Stricker's Manual of Histology, Am. ed., pages 614 and 615.

† Mundé in American Jour. Obst., Jan., 1879.

in the *Am. J. Obst.*, Nov., 1874, twelve years after his first operation :

"November 27, 1862, I first operated for the relief of a double lateral laceration of the cervix, by freshening the surfaces and bringing together the anterior and posterior flaps with interrupted silver sutures. This patient had been an invalid for several years before coming under my care, and had been treated for menorrhagia and hypertrophy of the uterus, with an extensive erosion. She was undersize, of a naturally delicate constitution, and after a severe and protracted labor, with difficulty had given birth to a large child. Her general appearance indicated incipient phthisis, but no evidence of a tuberculous deposit could be detected. The uterus was some four inches in depth, and an erosion extended about two inches in diameter over an enormous cervix. With great care this erosion had been healed several times, by maintaining the recumbent position for a sufficient length of time, but a relapse to the former condition recurred in each instance shortly after beginning to exercise by walking. I had almost despaired of being able to offer her any permanent relief, and attributed my want of success to the condition of her general health. While making a digital examination one day I was puzzled to account for the greater width of the cervix in comparison to that of the body beyond, a condition I had for the first time appreciated. I placed her on the left side, and with Sims' speculum brought the cervix in view. I drew the posterior lips forward toward me with a tenaculum, but with no special purpose, when I was surprised to observe that it had decreased to nearly half its previous size. On lifting up the anterior lip with a tenaculum, in the other hand, so as to bring the two portions in approximation, the outline of a cervix presented, of nearly a normal size. The difficulty was at once apparent, for the parts had rolled back within the uterine canal, and a deep lateral fissure became evident, which extended on each side entirely through the cervix and beyond the vaginal junction. On separating the flaps and forcing them back to their former position, I saw the tissues gradually roll out, and the cervix again present its previous appearance. There could then be detected no appearance of laceration, and with the reduplication of vaginal tissue over the sides of the uterus, as I have already described, the cervix presented a normal length above its apparent junction with the vagina. The remedy at once suggested itself; the operation was performed with the aid of my assistant, Dr. G. S. Winston, and I believe Dr. T. G. Thomas was also present. On completing the operation, the uterus was five inches in depth, it rapidly reduced in size, and in time all evidence of local disease subsided, but she never entirely regained her general health. Some seven years after the operation, Dr. F. N. Otis, of this city, her family physician, detected a tuberculous deposit, and she has died of phthisis within a few months, having been ten years under my observation. For two years previous to her death she had resided abroad, but, as a friend, I was kept advised of her condition, and she continued free from uterine disease. I am fully satisfied, at the time of the operation her condition was so critical that it would have been but a question of a few weeks before a tuberculous deposit would have

taken place. Although she never recovered fully the loss of vitality to which this injury had reduced her, yet her life was beyond question prolonged many years by the operation."

After the reading of this paper before the N. Y. Co. Med. Soc., Sept., 1874, Dr. J. Marion Sims said:

"When I went abroad in 1862, amongst the patients I turned over to the care of Dr. Emmet was the lady whose case forms the basis of the paper he has just read. She belonged to the upper walks of life, and had been under my charge for twelve or eighteen months. I remember the peculiarities of her case, so well described by Dr. Emmet, as vividly as if it were but yesterday. The bilateral laceration of the cervix, and the consequent eversion of the hypertrophied, congested cervical mucous membrane constituted at that time a difficult problem to solve. During the whole time that I observed this case no benefit resulted from local treatment, and I am sure that nothing short of the method so successfully adopted by Dr. Emmet could have been of the least service to her. I now only wonder that this operation had not been worked out sooner. When the perineum is lacerated, the necessity for its reconstitution is self-evident, and it is singular that the necessity for reconstituting the integrity of a lacerated cervix did not sooner force itself upon the surgeon. The operation as devised and practiced by Dr. Emmet is as simple, as safe and as certain in its results, as is the operation for a simple case of vesico-vaginal fistula. The same principles underlie each. The same free denudation of tissue, the same method of suture, the same after-treatment, and the same security from danger, belong to both alike.

"I have performed the operation often enough to speak in positive terms of its value. The discussion of the subject must, of necessity, be one-sided. There can be no objection, no opposition to the operation. We must accept it as Dr. Emmet has given it to us. We can't modify the operation; we can't change it; we can't improve it—for it is perfect—perfect in its method, and perfect in its results.

"We owe to Dr. Emmet a debt of gratitude for this valuable contribution to uterine surgery. Like all new operations it is likely to be abused, but the time will soon arrive when it will assume its place in the foremost rank of useful improvements.

"After the subject had been discussed by other members of the society, Dr. Marion Sims rose again, and said: 'I am personally so impressed with the importance of Dr. Emmet's paper in a practical point of view, and so pleased with the manner in which he has presented it to our consideration, that I beg leave to move a formal vote of thanks to Dr. Emmet for his most valuable contribution to surgery.'"

The preparatory treatment insisted upon by Emmet is absolutely essential to the best results, and has for its object the healing of the erosion by mild topical applications, the reduction of the congestion by the hot vaginal douche applied for twenty min-

utes twice daily, the puncture and emptying of the cysts, if any be present, replacement by mechanical support if indicated. The operation is strictly contra-indicated by the slightest evidence of peri-uterine cellulitis or pelvic peritonitis. If performed after suitable preparation it will be followed by prompt disappearance of congestion and rapid involution.

But is there no means of accomplishing these results without the application of sutures? Before proceeding, I desire, even at the risk of prolixity, to indicate once more the pivot upon which this cervical disease rests—contact of a congested intra-cervical membrane with the irritating acid secretion of the vagina, and its consequent exposure to friction and other mechanical injury. The disease then depends upon the hostile surroundings of an already congested membrane. Any reasonable plan of treatment must therefore look to replacment of the membrane to its normal position within the uterus, or to modifying it so that it may successfully resist its abnormal hostile surroundings. Much may be accomplished by the mild treatment already pointed out as preparatory to operation, and many of the milder cases may be cured. But a large number remains which can only be benefited, and still another large number upon which this sort of treatment has no effect whatever. Even those supposed to be cured are in danger of relapse. We have then, in this treatment, a valuable and indispensable aid to the operation, not a substitute. The everted membrane can neither be securely replaced by these means, or so modified as to endure its hostile surroundings. Again we ask, How shall this membrane be changed? There is but one reply, by cauterization, persistent and prolonged until the everted membrane has been replaced by a covering of dense, contracting, cicatricial tissue. If ordinary caustics are not powerful enough, we must invoke the caustic potassa and the actual cautery, and should these fail, amputation.

Ample authority of high order, for this practice, may be drawn from every capital in the civilized world. Dr. Thomas,* under granular ulceration, says:

"Should eversion of the cervix exist, the hæmorrhoidal mucous membrane should be at once removed by the scissors or by the curette, and should much

* Diseases of Women, page 358.

gaping of the os be present, the actual cautery or lunar caustic should be employed. I have spoken so freely elsewhere of the danger of producing cicatricial contraction of the canal and induration of the cervix that it requires no further mention here; in eversion however a certain amount of contraction is to be desired."

I am aware that this quotation does not fairly represent the present views of Dr. Thomas. He now recognizes the true cause of granular erosion, and, excepting Emmet, perhaps operates more frequently than any other man in the world.

Dr. Jacobi, of N. Y.,* recommends the actual cautery in cervical erosions, and claims to have been the first to use it in such cases.

Under "ulceration and enlargement," Dr. Byford† says:

"It is a very obstinate and discouraging state of the disease, but will usually yield to sufficiently energetic and long continued treatment. The boldness in the use of caustics necessary to the cure of such cases as these, requires strong nerves to institute and thoroughly execute."

Under "thoroughness and perseverance in the use of the caustic," he says:

"Failures occur very frequently on account of too little being done by the caustic. * * The treatment must be persevered in until the cure is complete."

Under the chronic or ultimate effects of the caustic is added:

"In very many cases where the application is made to the os uteri for several months that orifice becomes so small as to be of the size of a mere pinhole. * * We need not be embarrassed in our treatment by this occurrence, as we can easily dilate the os uteri to almost any extent by tents of compressed sponge or slippery elm bark bougies. By using one of these tents or bougies twenty-four hours before we desire to make the application, the opening will be large enough to answer all purposes."

These then are the agents to be substituted for Emmet's operation. But there is strong evidence going to show that the substitution of a hard-contracting scar for the cervical or endometrial membrane may irreparably incapacitate the uterus as a reproductive organ and exercise a very pernicious influence upon the general nervous system.

It is axiomatic that the os uteri contracted to the size of a mere

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* *Medical Record*, March 9th, 1878.

† Byford on the Uterus, pages 99, 174, 180., 1871. [Since the reading of this paper Dr. Byford has informed me that he has almost entirely abandoned the use of nitrate of silver and topical applications to the uterus, and has substituted agents of a milder nature.—E. C. D.

pin-hole is incapacited for the passage of the menstrual and seminal fluid.

It is evident that the attempt to enlarge a cicatricial canal by dilatation or incision will invariably be followed by a marked tendency, at least, to recontraction.

It is highly presumptive that a hard-contracting cicatricial cervix would not participate fully in the evolution of the gravid uterus, and that in labor, its rigidity would occasion delay and subject it to great danger of rupture.

A priori, therefore, we may conclude that the cicatricial cervix is crippled, if not incapacitated for the natural performance of its menstrual and other reproductive functions.

But Dr. Emmet* asserts that cicatricial tissue on the cervix is frequently the cause of excessive nervousness and neuralgia in other parts of the body, and that, by the inclusion of nerve filaments, as in sensitive stump after amputation, it may serve as a constant and hidden source of nerve irritation. He has observed in his immense experience, covering thousands of carefully analyzed cases, that the anemic nervous neuralgic diathesis is peculiarly liable to be associated with cicatricial cervix. That the cicatrix and this diathesis have the relation of cause and effect I freely admit remains yet to be proved, and, to that purpose, I submit the following brief reports of two cases as evidence.

† A lady consulted one of the most distinguished ophthalmologists in America for a long-standing, severe and obstinate neuralgia of the eyeball. As the only possible means of relief extirpation of the eye was finally advised ; this operation the patient declined and the pain continued. She was subsequently operated upon by Dr. Emmet for laceration, and in the operation he removed a wedge-shaped piece of cicatricial tissue from the angle of the laceration which nature, in the vain attempt to bridge over the gap, had placed there. Immediate and permanent relief followed.

In April, 1878, I performed a similar operation upon a lady in Lafayette, Ind. She had for years suffered from almost constant pain in the top of the head, and up to the time of the operation every resource of treatment had failed.

In this case the cervix was not eroded, but from the perseverance of some one in making caustic applications, it had suffered considerable loss of substance. The indurated tissue was very marked and abundant, so that I

* His two memors on laceration.

† I am not aware that this case has been published. This brief reference is drawn from the verbal report of Dr. Emmet. E. C. D.

was compelled to sacrifice an unusual amount of the cervix in its thorough removal. Entire relief from pain followed. A letter from her physician, Dr. E. D. Powers,* in the casual mention of the case, states that she now enjoys excellent health.

These cases are only two of a large number which strikingly illustrate Emmet's views of the effects of cicatrical cervix.

This subject of wholesale cauterization of the uterus is of vital importance and ought to be agitated until it is better understood, and therefore better appreciated. We certainly have facts and probabilities enough to suggest the question, whether the cautery which requires "strong nerves" on the part of the doctor, does not require stronger nerves on the part of the patient?

In vivid contrast with the cautery is Emmet's operation, for it cures not by producing, but by removing the cicatrix.

During a residence of eighteen months at the Womans' Hospital in the State of New York, I had opportunity of observing and treating several hundred cases of uterine diseases. Of this number many came from their attending physicians with the diagnosis of hypertrophy and elongation of the cervix and had been sent in the expectation of amputation—an operation which, except for malignant diseases, is unknown in that institution, not having been performed, to my knowledge, for more than two years, in the combined services of Drs. Peaslee, Emmet, Thomas and Barker, although cases were continually presenting themselves in which the popular treatment would have been amputation. The brief report of a single case will illustrate them all.

An excellent description of the appearance presented by this case may be found in many of the popular gynæcological treatices under the head of Hypertrophy and Elongation of the Cervix.

It presented the apparent elongation of both anterior and posterior lips of the cervix, which were actually protruding through the vulva. The utero-vaginal attachment appeared at about its normal distance from the vulva, so that the vaginal portion of the cervix seemed to point clearly to the diagnosis of extreme hypertrophy of the anterior and posterior lips. These lips were entirely separate from one another to the extent of their elongation, which appeared to be about three inches. In examining this patient for admission to the hospital, my first impression and also that of my senior assistant, Dr. VanVorst, was that of two large uterine fibroids protruding from the uterus into the vagina, but upon closer examination we agreed that it

*I regret that the time is now too short to obtain a more definite history respecting the continued absence of pain.

was a case of true classical hypertrophy of the anterior and posterior lips. Knowing that Dr. Emmet had denied the possibility of such hypertrophy, we assigned the patient to his service, and waited his next visit. He promptly placed the patient in the knee-chest position, and introduced Sims' speculum; the vagina filled with air, the uterus was carried by gravity toward the diaphragm, the true utero-vaginal attachment now appeared in its true relation, about an inch from the end of the cervix, a deep laceration extending into the vaginal walls more than two inches on each side was evident. The depth of the uterine canal, measured by the probe, was nearly six inches; it was a case of sub-involution and procedentia, depending upon extensive laceration, of eight years' standing. After four weeks of preparatory treatment the rent was closed with about twenty silver sutures. Union was by first intention. In another month the canal measured three inches in depth, and before this patient was discharged, senile atrophy of the uterus was actually commenced. In another similar case, in which the apparent elongation was symmetrical, not specially involving either lip, but the entire cervix, the laceration was unilateral.

Barnes, of London, on Diseases of Women,* presents three notable cuts, illustrating what he calls hypertrophy and elongation, a condition in which he advocates amputation. Should he ever make proper use of the knee-chest position, the Sims' speculum and the two uterine tenacula these plates will become valuable, for he would then use them to illustrate *laceration of the cervix with procedentia and subinvolution.*

It has never been claimed that Emmet's operation is a panacea. It is only a safe, reliable, efficient and practical means of removing such abnormal conditions of the uterus as eversion and its consequent erosion, or "ulceration," congestion, "patulous os," subinvolution and uterine catarrh. More than this has never been asked or expected of it. That it will with entire safety accomplish some of these results in every instance, and frequently all of them, is shown in the history of hundreds of cases.

The operation is as safe and simple as that for vesico-vaginal fistula and requires equal skill. The indication for its performance is eversion of the intra-cervical membrane. Dr. Paul F. Mundé,† in his recent and notable paper, makes a strong plea for the early performance of this operation, believing it to be the most prompt and efficient treatment, in all cases of sufficient ex-

* Barnes, Diseases of Women, pages, 120, 121, 122.

† Am. Jour. Obstetrics. Jan. 1879.

tent to produce pathological effects. From his paper, I make the following quotations.

"At a meeting of the New York Obstetrical Society, held Nov. 20th, 1877, Dr. Alex. J. C. Skene, the President, expressed the opinion that there were many abnormal conditions of the cervix uteri, other than laceration, which could be cured better by this plastic operation than by any other means. While he did not explain himself more precisely, I drew the inference that he alluded to conditions very similar to those which I have been describing *(slight laceration)*, and which I have looked upon as, under proper conditions, calling for the operation.

"Another reason why trifling ectropia should not be allowed to go on for years unheeded and untreated, was recently advanced by Prof. Breisky,* of Prague, who has observed and operated upon four cases of laceration in which one of the everted lips had become carcinomatous in consequence of the irritation to which the exposed cervical mucosa was subjected. These observations are confirmed by Veit,† who, out of nine cases of carcinoma-cervicis, found three in which the disease originated in the enlarged glandular elements."

Emmet, in his memoirs, preceded Breisky in suggesting this relation of laceration to malignant disease.

Dr. Skene, in the Proceedings of the Medical Society of the County of Kings, June, 1878, advocates the substitution of silk for wire sutures. With these he had operated eight times in his office and sent the patients home in the street cars, to return in a week or ten days for removal of sutures; in every instance union was good. These were cases of slight laceration. This plan of Dr. Skene certainly simplifies and shortens the operation, and, if in respect of safety and perfect union it prove practical, it must inevitably remove all objection to the operation in the milder cases.

I would not, however, risk the danger of this plan, even in mild cases, until its safety had been demonstrated by a large number of cases. It certainly is not applicable to lacerations extending past the vaginal attachment.

The operation, like all other surgical procedures, may be performed contrary to indications, or without suitable preparation, or with insufficient skill, and therefore to the detriment of the patient. Then the misguided practitioner should pay the penalty of his own fault; the operation should not be compelled to do so for him.

* *Wiener Med.-chir. Rundschau*, August, 1877.

† Gynecol. Sec. German Congress of Physicians, 1877.

Article II.

THE MICROSCOPE IN ITS RELATION TO MEDICINE AND CEREBRAL PATHOLOGY.* By J. N. DeHART, M.D., late Assistant Physician to the Hospital for Insane, Mendota, Wis.

Since the discovery of the microscope, in the 17th century, much progress has been made in many departments of science, and many revelations have been made to man, which hitherto were a hidden mystery.

Hassel in 1849 first published his Microscopic Anatomy, which was revised by Dr. VanArsdale in 1851, who issued an American edition. The volume of well executed plates which accompany this work has received much praise, which it so well merited at that day. Soon after, other works on this very important and interesting subject were published in England and America.

The many important improvements that have been made in microscopical appliances enable the student and physician of the present day to ascertain many hidden facts which, only a few years since, were not known.

While there are a great variety and number of microscopes now made and offered for sale, yet those only who have studied with the microscope know the comfort and satisfaction to be derived from the use of a good one; and by this is meant not only excellence in object glasses, although these are the most essential to a good instrument, but excellence in all the details of accessory instruments, and in nice mechanical adjustment.

Carpenter, in his valuable work, says "that of the many instruments which have been applied to scientific research, there is perhaps none that have undergone such important improvements, within so brief a space of time, as the microscope, has received the last quarter of a century; and there is certainly none whose use under its improved form has been more largely or more rapidly productive of most valuable results."

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* This paper was read before the Wisconsin Academy of Sciences, Arts and Letters, July 25, 1878, at Milwaukee, Wis.

As an optical instrument, the microscope is now at least as perfect as the telescope. In botany, zoölogy, anatomy and physiology, the student finds the microscope a very valuable and inseparable assistant.

Every microscopist, however limited may be his opportunities, has a wide range of observations presented to him in the study of the lower forms of animal life, with the strongest incentive to persevering and well directed inquiry, that the anticipation of novelty and expectation of valuable results can afford. And it is not only in the study of the minutest forms of animal life that the microscope has been found of great service, but the anatomist and physiologist, who have made the human system their especial object of study, and had been led to believe that the information obtained by their repeated scrutiny into every portion accessible to their view, was all that lay within their power, have found in this instrument of research the means of advancing further, and of gaining a much deeper insight into the mysteries of life than had ever before been thought possible.

To the German physiologist, Schwann, who, as far back as 1839, published his "Microscopical Researchcs into the Structure and Growth of Animals and Plants," are we indebted for the beginning of a new era in all parts of animal physiology, which comprises the vegetative life of the organized fabric. In these researches, the author had in view the study of the development of the animal tissues. He also found that although their evolution cannot be watched while in actual progess, yet their history may be traced out by the comparison of the successive stages brought to light by the microscope; and in so far as this has been accomplished, for each separate part of the organism, the structure and action of its several components, however diverse in their fully developed condition, are found to resemble each other more and more closely, the more nearly these parts are traced back to their earliest appearance.

By this retrospective study, we find that man in the beginning was an embryonic mass, composed of a congeries of cells, all apparently similar and equal to each other; tracing this farther back, it is by the aid of the microscope ascertained that all have

their origin in a primordial cell, which is the first defined product of the generative act.

In following the history of the germ from its simplest and homogeneous form to that of the completed and perfected type, we have another illustration of that law of progress from the general to the special, which is certainly one of the highest principles yet attained in the science of life. By aid of the microscope we find that the same rule applies not only to man, but also to animals and plants, which have their origin in the single cell.

And by thus persevering in our researches, by the assistance of this instrument alone, there is furnished to our visual power the history of the organic germ, from the simplest form, which, being homogeneous, seems common to every kind of living being which lives, grows, and multiplies, without showing any essential advancement upon its embryonic life.

The microscope in its use and application to the science and practice of medicine, is a very valuable adjuvant. The want of a genuine knowledge concerning the origin, nature and properties of disease germs have led Drs. Beale and Maclager to give this subject their special attention, and as the result of their labors we have two quite exhaustive works on the germ theory of disease.

Dr. Beale gives in his work several well executed drawings of disease germs, as they appeared in the microscopic field, and his views in regard to them are well received, coming from one who has written so much and so ably, after very careful microscopical research, not only at home but also abroad. He says, in relation to microscopic study, "that minute investigation in connection with disease has been most unwisely discouraged, by purely scientific men on the one hand, and by those who confine themselves to their practical medical duties on the other. By the first, because they think that medical practice affords occupation enough for one man; by the last, on the ground that scientific work unfits a man for the practical duties of the profession." It has too often happened that the very few who have devoted themselves to real medical inquiry have been unfairly treated and by the very persons who should have offered them support.

The time has now arrived when the incentive to such a course should be openly condemned, as resulting from narrow, ancient

prejudices, which have long survived their allotted time. Every intelligent person should do his utmost to further these branches of investigation, which, by aid of the microscope, have already exerted so great an influence upon the discovery of the wonderful changes which occur in the human body, in health and disease, and therefore upon the progress of medicine.

The manner in which disease germs enter the human system is very ably portrayed by Dr. Beale, and his illustrations of their development in the circulation as bioplasm, as drawn from views under the microscope, are beautifully colored and delineated. While there are a variety of opinions already expressed upon this subject, yet it is admitted that they may enter through many different sources. If suspended in the air, they may pass toward or into the air cells of the lungs at each inspiration. Some of the lightest particles might reach the ultimate air cells, where an exceedingly delicate membrane, easily penetrated by living particles, alone separates them from the blood. It is already known that disease germs, like the lower vegetable and animal organisms, will live for a considerable time in water.

According to Dr. Beale's views "of all media taking part in the wide diffusion of disease germs, and facilitating their introduction into many organisms, water, there is reason to believe, is the most general and perhaps with the exception of air, the most effective." Then, again, the particles of contagious bioplasm in germinal matter may enter the body through the skin. The epidermis being swollen and moist, living particles could easily insinuate themselves between the slight chinks which exist between the epithelial cells, and gradually make their way into the capillary vessels beneath. There are also instances in which disease germs gain access to the lymphatic vessels, and grow and multiply, thereby causing abscess in some lymphatic glands. The blood is sometimes infected, and the poison then becomes general, affecting the entire system.

By the investigations of Dr. Salisbury, who commenced his microscopical researches in 1849, we are shown that the blood in certain specific diseases contains spores and embryonic filaments. In 1866 he first published his researches, and in the *American Journal of Medical Sciences* for January there is a valuable

paper on this subject. He describes two new algoid vegetations, which he claims are the specific cause of certain diseases.

He claims that one of them attacks especially those histological elements, the characteristic proximate organic principle of which is either gelatin, ostein or chondrin. These are connective tissues proper, bone and cartilage. It first attacks connective tissue at the point of inoculation, and then is absorbed by the lymphatics in the vicinity of the primary lesion. Afterward we have the usual sequelæ of such specific poisons, with occasionally a hard swelling of the connective tissue. The last, he claims, is due to a too rapid development of the glue tissue cells, excited by the active growth of the germs (cypta syphilitica).

These minute organisms, are only seen with a good objective, and although a $\frac{1}{5}$ of an inch objective can detect their presence, yet a power of $\frac{1}{25}$ of an inch is required to make them appear in a perfect form. Dr. S. found this organism to be algoid in character, and it existed in multitudes, and in all stages of development, from the spore to the mature filaments. At the time of writing his paper, in 1868, he had examined over 100 cases, and uniformly found this vegetation; and, what is more interesting, he discovered that the same vegetation shows itself in the blood as soon as the disease becomes constitutional. Its presence or absence in the blood is believed to be a sure guide for commencing or discontinuing treatment.

The filaments, as they occur in the blood, are more highly refractive, and have the peculiar obtusely rounded extremities in a more marked degree than in some others. These crypta he describes as being minute, transparent, highly refractive algoid filaments, which develop in living organic matter from spores.

During the past year Dr. E. Cutter, of Boston, has been engaged in very careful microscopic researches in the same field in which Dr. Salisbury has already found so much that relates to the development of disease from germs. In these investigations Dr. Cutter not only corroborates all Dr. S. has published in regard to his discoveries, but goes even farther, and makes the existence of these disease germs more evident and positive.

The three micro-photographs, which I here present for your examination were received from Dr. Cutter a few days since, and

I trust that a close examination of them will convince those who are skeptical of these facts.

The first specimen of diseased blood was examined with a $\frac{1}{5}$ in. objective (3 class Tolles, X130), and shows copper colored spores and fat.

The second specimen was submitted to a power of $\frac{1}{50}$ of an inch objective (Tolles, X 1600), and exhibit mycelial filaments also copper colored.

The third specimen was examined with an exceedingly high power, $\frac{1}{75}$ of an inch objective (Tolles), and is magnified 1,950 times, showing an enlarged white blood corpuscle containing spores that are copper colored.

This last objective is the highest power that has been used in this country, and I do not think that there are more than one or two in use in Europe. It was made expressly for Dr. Hamman, of Boston, by Mr. Tolles, and the Doctor assists Dr. Cutter in his investigations. This objective was exhibited by Dr. Cutter at the recent meeting of the American Medical Association in Buffalo, and a very interesting lecture on the morphology of blood, accompanied by a stereopticon exhibition of these views, was given by him.

The microscope has been of incalculable aid to the student of cerebral pathology, and without it the pathologist would indeed be groping in the dark.

The lesions observed in the structure of the nerve cells, and in the pia-mater, dura-mater and arachnoid, which are associated with some forms of insanity, have opened up a field in pathological research, in which Drs. J. Crichton Browne, Ferrier, Herbert Major, Hughlings Jackson, Lockhart Clark, Meynert, Westphal and others in Europe, and Drs. Jewell, Hammond, Seguin, Schmidt, S. Weir Mitchell and Spitzka in this country, have already entered, and are directing much time and patient study to these important pathological changes. The microscope enables us to observe those lesions which occur in the gray cortex of the hemispheres, and in the medulla, pons and spinal cord.

The specimens which I shall exhibit by aid of the microscope are those of chronic mania and general paralysis or progressive paresis (and ossification of the falx cerebri). The second form of

insanity, which is characterized by delusions respecting great wealth and power, is accompanied by the following physical symptoms, in which there are an unequally dilated pupil, an inequality of the facial fold, want of muscular co-ordination and quivering of the tongue. The lesions observed in the gray matter of the hemisphere in this form of insanity are a general degeneration of the nerve cells.

We usually find an adhesion of the pia-mater, and a dilated condition of the vessels, although the last is also present in cases of chronic mania. The vessels in some cases are quite tortuous, but not obstructed. While the layers of the gray matter are quite distinct, the outer layer is of normal density and presents the appearance of health.

The individual nerve cells in the smaller varieties, and sometimes in the larger pyramidal cells, present characters which are to all appearances perfectly normal. There are two pathological conditions which may be observed, and are therefore quite important.

Dr. Lockhart Clarke ascribes the first condition to a loading of the cell by pigment granules, and the cell must therefore lose its normal character. Sometimes it is not much altered in size, although it is, as it were, rounded and inflated, its branches having disappeared, and nucleus gone, we find nothing but a mass of pigment granules loosely held together.

Dr. Herbert Major claims that the above description of the transformation of nerve cells is quite exceptional. The other pathological condition consists in the presence of nerve cells of immense size, located about half way in the depth of the cortical layer. They stand out like giants among the other cells, and instantly attract the attention of the observer. They are usually of pyramidal form, but frequently their contour is irregular. Their branches are quite numerous, sometimes numbering eight or ten proceeding from a single cell. The nucleus of the cell is large, but not proportional to the size of the containing body. These large cells are usually few in number, seldom exceeding ten, but are usually less, and occasionally none are found. So far, those engaged in pathological research have found them more numerous in the parietal region than in the occipital and

very rarely in the frontal lobes. While they differ in appearance from those previously described, the cell wall, nucleus and branches, being all very distinct, yet as regards their size they are not excelled. The most eminent psychologists have not advanced their opinions as to the pathological significance of these lesions, but leave the matter for further research and inquiry.

In another case of general paralysis other lesions were observed, somewhat different from those just stated.

The most external layer of gray matter presents a delicacy and whiteness to a greater degree than in health, and contrasts strongly with other pathological specimens.

There is an abnormal condition of the cell, as in other cases, and its body is shrunk, the wall being closely applied to the nucleus, which is of large size and more or less round.

As the degenerative stage progresses, no cell wall can be seen, the nucleus alone being all that is left. An inflated condition of the cell also exists.

Sometimes patches of molecular degeneration are observed in the white substance, the normal nervous structure being destroyed.

These spots have been termed by Dr. Tuke and other psychologists "miliary sclerosis."

While the above lesions are not always found on making a microscopic examination of the brains of insane persons, who have died with general paralysis or progressive paresis, yet a simple atrophy of the nerve cells is most frequently met with. It may be observed also that the nuclei of the large cells are not always swollen and rounded, as is observed in some cases of general paralysis.

In another patient who died with general paralysis the spinal cord, including the pia-mater, showed the latter, as well as the connective tissue septa radiating from it, to be thickened, and near the latter a considerable number of enlarged granule cells. On microscopic examination, a symmetrical area of the "vesicular degeneration" of Leyden was found at the floor of the sulcus collateralis, medulla cervicalis. This was small in extent, but larger on the right than on the left side. The large ganglion cells of the anterior cornua appeared some atrophic, others

brittle, and still others contained large pigment clumps, or a vitreous (amyloid) condition of the protoplasm. The pyramids of the medulla oblongata were atrophic, and there was considerable connective tissue hyperplasia to be seen in them, as well as in the restiform columns. Finely developed ependymous granulations covered the floor of the fourth ventricle.

On microscopic examination of the cortex of the frontal lobe, the pia-mater was found so intimately adherent that it could not be removed from the microscopic section, and was thickened. The gray substance was diminished in depth; the nerve elements appeared considerably diminished in number, and many triangular pericellular spaces, which usually lodge a large pyramidal nerve cell, were filled with irregular masses of detritus, with here and there a free nucleus. One nerve cell was observed which took no carmine staining, and appeared vitreous. The vessels were not well filled; their walls appeared thickened, and were more contorted than they are in normal brain, but not thrown in knots. Deiters cells in great numbers were observed near the course of the arterioles, and in one instance a clear connection could be seen between a capillary and one of these bodies. This appearance may serve as a basis for confirming the views of Magnan and Mierzejewsky (?) that vascular new formations occur in progressive paresis, cornu ammonis atrophy. This case exhibited the permanent changes so characteristic of general paralysis, and which mark the irrecoverable damage sustained by the brain in this disease.

The atrophy of the nerve elements is in strict parallelism to that obliviousness of special subjects and events characteristic of this disease, and which is the basis of their pseudo-delusions and kleptomania, for all these can be reduced to defective, in contradistinction to perverted association.

The spinal changes are similar to those observed by Westphal, and it is not definitely settled whether they represent a secondary or primary process. We observe in these lesions of the cord the cause, which results in the inability of the patient to control and regulate certain secretions.

In making a microscopic examination of the spinal cord and brain of a patient who died with chronic mania, the following

pathological lesions were found. While nothing that can be termed specifically pathological was found in the cord, yet the blood vessels were markedly injected, and there were numerous free nuclei in the adventitia of the vessels. The ganglion cells were entirely normal, with the exception of a few in the most external portion of the trigonum cervicale, which contained some pigment of a granular form; nothing noteworthy was observed in the white columns. The vessels of the brain are all injected, and thickly crowded blood corpuscles can be distinguished in the lumen of the larger and smaller arterioles; the ultimate capillaries are not so completely filled. Notwithstanding this distension of the arterioles with blood, the adventitial space appears enlarged, and in one portion of the præcentral convolutions, this adventitial space presents a cystiform dilatation. Outside the vessels and on the neuroglia border of the perivascular spaces, thickly crowded lymphoid bodies were to be seen, most marked in specimens from the frontal and temporal lobes. In many instances the track of minute vessels could be traced with a low power, by the dark rows of granules lying along this track. This is especially well seen in specimens stained with hæmatoxylin. In the nerve cells themselves no charges were observed which could be safely referred to an ante-mortem condition.

In commenting on cases of chronic mania not prominently marked by dementia, either collateral or terminal, it may be remarked that palpable changes of the essential nerve elements have never been satisfactorily shown, nor need we look for such. On the contrary, purely vascular and resulting bio-chemical changes, are fully sufficient to explain all the symptoms of such a case as the history (clinical) affords, except, of course, those dependent on perverted associations which cannot yet be referred to a somatic basis. Accordingly we find distention of the lymphatic sheaths of the cerebral vessels, as residue of long past and recent cerebral hyperæmia. The nuclei lying along the perivascular border, have, in like manner, been the result of increased intervascular pressure, and have reached their present site per diapedism. The hyperæmia formula does not point to any larvated maniacal state existing at the time of death, but to the readiness with which individuals-predisposed, as the present patient was, to

cerebral engagements, respond to all febrile affections by a meningeal and spinal blood fluxion.

In Jewell's *Journal of Nervous and Mental Diseases* you will find a short monograph, entitled: "Contribution to the Study of Ossification of the Meninges," in which I described a case where the falx cerebri was ossified. I have made some microscopic specimens of this interesting case, and will show you true bone as the result of this ossification. Calcareous plates situated in the cerebral membranes are frequently found in epileptics and in lepto-meningitis of long standing, as well as in pachymeningitis. True ossification is rather rare, and it usually begins in the inner surface of the cranial bones, and presents itself in the shape of spiculæ of bone. In calcareous plates, bone corpuscles are never found; in spiculæ and bony tumors they are always present. The former owe their origin merely to a deposit of calcareous matter, or salts in exudative inflammatory products. The latter are the result of a true organizing action, through the medium of cells, exactly as in normal bone. Ossification in the membranes of the brain is of very rare occurrence, but calcareous degeneration of their exudative laminæ sometimes takes place, as it is known to occur even in ganglionic cells of the brain.

Erlenmeyer found the commissure of the optic nerves hardened by deposits of calcareous matter in the brain of a monomaniac, who had died with epileptiform convulsions.

Förster, in his atlas of pathological anatomy, describes calcareous cells found in the gray substance of the lumbar enlargement of the spinal cord of a boy whose lower extremities were paralyzed.

Heschl, in Schmidt's *Jahrbücher*, 1863, is the only one, so far as I am able to ascertain, who met with what he calls an ossification of cells in the brain of a patient æt. 22 years, who died melancholic; they were in the compact substance surrounding a small hæmorrhagic cavity in the central part of the right cerebral hemisphere. He used hydrochloric acid to dissolve the granulated contents, and this left the cells with a pale outline in view.

In preparing these spiculæ for microscopic examination, I selected chromic acid (0.1 to 25.0 of water), in preference to

using hydrochloric (dilute) acid. The decalcification takes place rather slowly, according to the strength of the solution, and this should be changed every few days, as the acid dissolves the lime more readily when this is frequently renewed. On microscopic examination these spiculæ were found to be true bone. Some sections of the ossified portion were placed in acid (chromic) for a few days; sections were then made, and stained with carmine in glycerine. They were then mounted in glycerine (Price's English) and submitted to an examination, which revealed the presence of the laminæ, Haversian canals and lacunæ of true bone.

Beginning, as these growths do, from that membrane which acts the part of a periosteum for the internal surface of the cranium, we are inclined to attribute the production of genuine bony plates in the dura (as well as in the falciform processes) to a relapse in the direction of its previous formative activity in infantile life.

The rapid advance in science, to which much is due in the revelations of the microscope, will I trust continue, and at no distant day receive such encouragement from all members of society that the microscope will be found in every household, and thus make a microscopist in every family.

ARTICLE III.

STUDIES IN RELATION TO THE PRODUCTION OF PAIN BY WEATHER.

By J. T. EVERETT, A.M., M.D., Sterling, Ills.

It has long been a popular belief that parts which are the seat of old traumatisms, chronic rheumatism and old tissue deposits become the seat of pain upon the approach of storms. This no one has attempted to explain. Until quite recently I have seen no other consideration of the subject in our literature than an admission of the general fact, without suggestion as to its cause and character.

As I had been in early life the subject of coxalgia, and since

then have been a periodical sufferer from the same trouble, I commenced, in the spring of 1866, a series of observations, with a view to solving the problem, if possible.

Careful observations, extending over this period of 12½ years, have established, in my mind, the main fact, but have failed to give me an explanation of the phenomena here considered.

In July, 1878, I addressed the following circular to two hundred and fifty of the most prominent medical men in this country and Europe:

STERLING, ILLS., July 1, 1878.

DEAR DOCTOR: Will you have the kindness to fill out this blank, and oblige,

Yours resp'y, J. T. EVERETT.

Etiology of Chronic Rheumatism.
Pathology of same.
Atmospheric Influence.
Ozonic Influence.
Electrical Influence.
Influence of Humidity.
Relation of Barometric Pressure.
Relation of Storm Waves.

To this circular the greater number very kindly replied at some length, giving many valuable hints and facts bearing upon the subject.

The majority believed that either electricity or magnetism was the principal factor, but did not know in what manner the cause operated.

A few suggested that ozone might be the primary factor; but they too failed to explain how or why it produced pain. But very few claimed that there was any direct relation between barometric pressure and the physical symptoms; while all admitted the close connection between storm waves and the advent of pain.

Dr. S. Weir Mitchell, in his very able and instructive paper upon "the relation of pain to weather," says:—"the separate factors of storms, such as lessened pressure, rising temperature, greater humidity and winds, appear, as a rule, to be incompetent,

when acting singly, to give rise to attacks of pain. Either, then, it is the combination which works the mischief, or else there is, in times of storms, some as yet unknown agency productive of evil. Such an agent may be either electricity or magnetism."

These statements seem to express the general opinion of the profession at large upon the subject.

Dr. Mitchell found that rheumatic subjects were too sensitive for careful observation. To me, however, they have proved most useful; perhaps because a thirty years experience with this intangible element has made me rather more expert in eliciting the true symptoms of other sufferers, and in rejecting those that are false.

I have observed and tabulated 14 cases of chronic rheumatism, 2 of traumatic neuralgia, 24 of chronic metritis and 12 of malignant anæmia of specific origin.

Many other patients had such negative symptoms as were useless in establishing results; they are here omitted.

It has lately become possible to ascertain the proximity of storm belts through the reports of the U. S. Signal Service office; and the observations made by me prior to the year 1871 are here omitted in consequence of defects due to the absence of these meteorological observations.

Since that year the occurrence of increased pain can be seen to have direct connection with the supervention of either rains, snows or dry storms.

I find that there is a close relation between the occurrence of pain and lessened pressure. The lessened pressure *per se* probably does not cause the pain; rather is it true that a common factor produces both. That humidity is still more closely allied to the occurrence of pain is also true. Yet this alone does not seem sufficient to either produce or relieve the symptom. Humidity, however, in connection with other storm influences, seems to be potent in relieving pain. Does this humidity furnish a better conductor for the passage of the systemic electricity from the body, or does it lessen the amount of magnetic induction? Whether the pain felt depends upon excess or deficiency of magnetism or excess or deficiency of electricity, is a question *sub judice*.

We know that the electric current is at times capable of allaying pain, but why? Temperature has little or no influence, either one way or another.

As to the time of day, there is a preponderance of evidence in favor of a period of greatest suffering between 9 and 11 p.m., and of a period of great but less distress between 8 and 10 a.m. These results differ materially from those obtained by Dr. Mitchell.

The longest interval between the onset of pain and the appearance of the storm, was in my own case, the pain appearing at 11:30 a.m., March 28, and no storm reaching my vicinity until 4:45 p.m., March 30th.

Upon the arrival of either rain, snow or a dry storm, the pain soon subsides.

My observations teach that Dr. Mitchell is correct in assuming that: "the amount of pain bears no relation to the amount of rainfall; neither does the abruptness of the barometric depression, the length, direction or severity of the storm." But that the location in the center or at the edges of the storm belt has a marked effect upon the degree and persistence of the pain, I am fully convinced. The nearer the center of the belt, and the more abrupt the invasion, the more intense is the pain and the shorter the duration; while at the edges of the belt, less fierce is the attack and more slow the retreat.

Thus it would appear that the morbific influence is most intensely active in advance of the storm, for a distance of 200 or 300 miles, according to the rapidity with which the storm center moves. If the velocity be great, the *influence* for pain is proportionately intense; if the storm moves slowly, this *influence* is less distinct and is felt proportionately at an earlier period. Upon the edges of the storm this influence gradually decreases and finally disappears. This influence would thus seem to be governed by the laws which control matter, or the forces which act through matter.

It would seem also to be governed by the laws which control the accumulation of frictional electricity in front of the rubber, the clouds acting the part of this rubber upon the negative earth. Yet this is not a true analogy, since, in the electrical machine,

the rubber must be perfectly dry, with a dry conducting medium, while in the case of the earth the rubber is a mass of aqueous vapor, and the cylinder more or less moist. Then, too, in the terrestrial machine the active agent collects and accumulates in front, while in the artificial apparatus this occurs at the points of the conductor.

The nervous system of the average adult, in its normal condition, is quite uniform in the amount of electricity generated and the amount of heat produced by tissue metamorphosis. In disease, however, the amount of heat generated may vary by 6 or 7 degrees, while the electricity may vary from the normal 9 or 10 times. Any disease which tends to check tissue changes, transpiration, assimilation or to favor tissue deposit, or to retard the play of the vital affinities, predisposes to this condition of the system.

The individual who readily "takes cold" has rheumatic pains. He who works hard and greatly fatigues any particular set of muscles, experiences there the same kind of pain. In chronic inflammation, where deposit has taken place; in the limbs of the inebriate where alcohol has anæsthetised and lessened the tissual change; in cases of pernicious anæmia or blood poisoning from any cause; in the professional man who has fatigued the brain by laborious and exhausting study, thereby retarding nutrition and assimilation; in the nervous woman who has suffered from exhausting influences; in the debauchee, and, in short, in every case where the laws of life are violated, this condition supervenes.

It is a noticeable fact that, aside from storm influences, terrestrial magnetism exerts a wonderful influence upon this class of patients.

In 1867–8 and also in 1872, when the Auroræ were of exceptional brilliancy and frequency, the periods of pain were more frequent, more severe and of longer duration, in proportion to the storm influences.

During the prevalence of the Auroræ, the pain was more intense, and upon their disappearance it also subsided. When the sun spots are more numerous, during an eclipse and also during the conjunction of the heavenly bodies, the pain is more severe, and gradually ceases as these phenomena disappear.

In 14 cases of chronic rheumatism, extending over a period o seven years (a total number of 168 months), the number of fals pain indications was 39; while the false barometric indication were nine in a record of 1,935 storms. In two cases of traumati neuralgia recorded for one year, each over a period of 24 months the false pain indications were two, with no barometric failure in 300 storms.

In 24 cases of chronic metritis, extending over a period o $258\frac{1}{2}$ months, there occurred 3,090 storms and only 68 false pai and 11 false barometric indications.

In 12 cases of malignant anæmia, extending over a period o 133 months, there were 13 false pain indications and three baro metric fallacies in 1,558 storms.

In the following table the first column gives the number of th case; the 2nd, the number of months; and the 3d, the year i which the cases were observed. The 4th gives the number o storms; the 5th, the pain indications; the 6th, the barometri indications of storms; the 7th, the number of rain storms; th 8th; the number of snow storms; the 9th, the number of cloud days; the 10th, the number of false pains; and the 11th, th number of false barometer indications of storms; while the 12t and 13th give the approximate percentage of errors both of pai and barometer.

In this table I have included under the head of "storms" every slight sprinkling of rain or snowfall or appearance clouds, as well as the most disastrous floods and tornadoes.

No. of Case.	No. of Months.	Year.	No. of Storms.	No. of Pain Indications.	No. of Barometric Indications.	No. of Rains.	No. of Snows.	No. of Cloudy.	False Pain Indications.	False Barometric Indications.	Per cent. of False Pain Indications.	Per cent. of False Barometric Indications.
R 1	12	1870–1	140	149	144	56	21	63	9	4	.060	.030
R 2	12	1872–3	128	128	127	52	31	45	0	1	.000	.000
R 3	12	1872–3	128	130	127	52	31	45	2	1	.014	.007
M 17	12	1872–3	128	127	127	52	31	45	1	1	.007	.007
M 18	12	1872–3	128	130	127	52	31	45	2	1	.014	.007
M 19	16	1873	60	61	60	31	2	27	1	0	.014	.000
M 15	6	1873	60	60	60	31	2	27	0	0	.000	.000
A 41	12	1873–4	138	140	138	101	21	16	2	0	.014	.000
A 42	12	1873–4	138	137	138	101	21	16	1	0	.007	.000
A 43	12	1873–4	138	141	138	101	21	16	3	0	.022	.000
R 4	12	1873–4	138	138	138	101	21	16	0	0	.000	.000
R 5	12	1873–4	138	140	138	101	21	16	2	0	.014	.000
M 26	12	1873–4	138	140	138	101	21	16	2	0	.014	.000
M 27	12	1873–4	138	142	138	101	21	16	4	0	.028	.000
R 6	12	1874–5	141	141	142	88	23	30	0	1	.006	.007
R 7	12	1874–5	141	139	142	88	23	30	2	1	.014	.007
R 8	12	1874–5	141	150	142	88	23	30	9	1	.063	.007
M 20	12	1874–5	141	151	142	88	23	30	10	1	.065	.007
M 21	12	1874–5	141	128	142	88	23	30	13	1	.092	.007
M 22	12	1874–5	141	150	142	88	23	30	9	1	.063	.007
M 23	12	1875–6	152	149	151	79	30	48	3	1	.022	.007
M 24	12	1875–6	152	149	151	79	30	43	3	1	.022	.007
M 25	12	1875–6	152	139	151	79	30	43	13	1	.092	.007
M 28	12	1875–6	152	150	151	79	30	43	2	1	.014	.007
M 29	12	1875–6	152	151	151	79	30	43	1	1	.007	.007
A 44	12	1875–6	152	149	151	79	30	43	3	1	.022	.007
A 45	12	1875–6	152	151	151	79	30	43	1	1	.007	.007
A 46	12	1875–6	152	151	151	79	30	43	1	1	.007	.007
R 9	12	1876–7	140	141	140	100	30	10	1	0	.007	.000
R 10	12	1876–7	140	142	140	100	30	10	2	0	.014	.000
R 11	12	1876–7	140	141	140	100	30	10	1	0	.007	.000
R 12	12	1876–7	140	140	140	100	30	10	0	0	.000	.000
R 13	12	1876–7	140	139	140	100	30	10	1	0	.007	.000
R 14	12	1876–7	140	150	140	100	30	10	10	0	.065	.000
M 30	10	1876–7	120	120	120	80	30	10	0	0	.000	.000
M 31	9	1876–7	118	119	118	78	30	10	1	0	.007	.000
M 32	9	1876–7	118	119	118	78	30	10	1	0	.007	.000
M 33	11	1876–7	130	130	130	88	32	10	0	0	.000	.000
M 34	11	1876–7	130	130	130	88	32	10	0	0	.000	.000
M 35	11	1876–7	130	130	130	88	32	10	0	0	.000	.000
M 36	12	1876–7	140	141	140	100	30	10	1	0	.007	.000
M 37	11.5	1877–8	148	147	149	54	21	73	1	1	.007	.007
M 38	12	1877–8	150	150	150	54	23	73	0	0	.000	.000
A 39	12	1877–8	150	150	150	54	23	73	0	0	.000	.000
A 40	12	1877–8	150	150	150	54	23	73	0	0	.000	.000
M 16	6	1878	71	72	73	21	16	34	1	2	.007	.014
A 47	6	1877	79	79	79	33	7	39	0	0	.000	.000
A 48	6	1877	79	79	79	33	7	39	0	0	.000	.000
A 49	7	1877–8	80	80	80	33	8	39	0	0	.000	.000
A 50	12	1877–8	150	149	150	54	23	73	1	0	.007	.000
T N 51	12	1877–8	150	150	150	54	23	73	1	0	.000	.000
T N 52	12	1877–8	150	150	150							

It will be seen from the facts here tabulated—the condensed statistics of many observations—that there is a remarkable correspondence between the prevalence of storms and of pain, thus suggesting that the latter springs directly from some occult storm influence. What is that influence, how does it operate and how can it be neutralized?

It certainly does not depend upon any single factor, unless it be electricity or magnetism. Is it not possible that the conductivity of diseased tissues may become so impaired, and that when storms approach and the air is charged to repletion with the electrical fluid, none escapes from the surface of the body? The systemic electricity might thus accumulate in the economy producing pain in indurated parts, in its attempt to pass off to the earth. Thus upon the occurrence of humidity a ready conductor is found, an equilibrium established and the pain subsides.

If this were true, an electrical current might establish an equilibrium, and thus speedily mitigate the pain. This I have attempted many times with questionable results.

Another indication of the fallacy of such a theory is the known fact that, when we insulate a patient suffering with acute inflammatory rheumatism, the pain ceases within six or eight hours.

It may be that in these patients not enough systemic electricity is generated, and that insulation by retarding conduction permits an accumulation of the electrical fluid. Can it be that the magnetic wave passes into the patient by induction, and that, in its attempt to pass out by conduction, the pain arises as in the first hypothesis?

Is it possible that the electricity preceding the storm converts a portion of the systemic oxygen into ozone, and that, this being an electro-negative oxygen, the absorption of another equivalent of electricity may cause pain in its passage from one tissue to another?

Although the coincidence of ozone and pain must be less frequent than many other single factors of storms, may it not be that this ozone being a stimulant, increases nerve metamorphosis, and increases the quantity of systemic electricity thus secondarily causing pain.

Which of these theories, if any, may be capable of demonstration, and, in default of all these, what may be the true explanation of the coincidence of pain and storms, is the problem I have endeavored to set forth.

ARTICLE IV.

HAS THE MAMMALIAN BLOOD-CORPUSCLE A NUCLEUS? By WM. T. BELFIELD, M.D., Demonstrator of Physiology, Rush Medical College. Read before the Illinois State Microscopical Society.

The question of the existence of a nucleus in the red blood-corpuscle of mammals has for many years engaged the attention of physiologists. Three considerations suggest such an existence. First, that a nucleus is apparent in all blood-corpuscles not mammalian: second, that nuclei have been recognized in the blood-corpuscles of fœtal mammals; that a nucleus, or the suggestion thereof, can be readily demonstrated in almost all other anatomical elements of mammals. Hence, the deduction has been made that all elements of tissue require nuclei; therefore that the homology of tissues requires that blood corpuscles should also possess them. Prompted by such reasoning, many observers have sought patiently and persistently to demonstrate the existence of these hypothetical bodies, devising new means and methods when old ones had proved ineffectual. Several times success has been claimed, and not a few observers have asserted their ability to demonstrate these nuclei; but, as a recent contributor to this subject has said: "When their methods and work have been published, and others have followed their directions, errors have invariably been pointed out, and the so-called nucleus has been absorbed in 'optical delusions,' and changes brought about by the reagents used." It is somewhat remarkable that the writer of these words, Dr. Stowell, of Ann Arbor, in the same article claims to have demonstrated the nucleus by a new method; or more accurately speaking, claims to have repeated the work of Prof. Boettcher, with confirmatory results. The method is as follows: The corpuscles are bleached by means of a saturated solution of corrosive sublimate in 96 per cent. alcohol. Into 50 parts of this solution one of blood is rapidly diffused. In twenty-four hours the supernatant liquid is poured off and alcohol add-

ed. In twenty-four hours more this is replaced by distilled water. The corpuscles are then subjected to staining agents. By this method Prof. Boettcher claims to have seen nuclei in a small percentage of the corpuscles so treated.

Upon reading these observations it occurred to me that the asserted nucleus might be, in part at least, due to coagulation of albumen and extraction of water (which certainly occurs), whereby a central thickening might readily appear, and hence a difference of refraction and apparent deepening of color be observed.

It seemed that if simple bleaching alone were to be accomplished by the reagents used, the same results should follow bleaching by other methods. I therefore instituted a series of observations, whose results I place before you in this paper and on these slides.

Let me, as preliminary, define the nucleus; for much of the difference of opinion on this question results, it seems to me, from a failure to identify this body. According to Tyson, the nucleus is a mass of bioplasm in the interior of the cell, "more granular, or darker in hue, by transmitted light than the remainder of the cell." * * "This living matter exhibits the important property of being stained by weak solutions of various coloring matters, as carmine, aniline, etc.," * * * "and by these means its demonstration is rendered strikingly easy." If then, after exposure to such a solution, we observe in the interior of a cell a sharply-defined mass exhibiting unmistakable color, the remainder of the cell being colorless, we assert the existence of a nucleus; the absence of such differentiation demonstrating with equal force the absence of a nucleus.

With this idea in view, I procured specimens of fresh blood from man, the dog, rat and turtle; exposed the corpuscles to the action of various bleaching agents—chlorine, sulphurous acid, acetic acid, a freezing temperature; then, when the coloring matter had been removed, immersed them in weak solutions of aniline and carmine, and mounted them in distilled water. I was careful to produce, as nearly as possible, identical effects upon all the specimens, using the same solutions for the same periods upon them all. By each method nuclei were clearly demonstrated in

the turtle's blood, but in no other specimen was there any differentiation of color. It is true that some mammalian corpuscles showed staining, but that staining was invariably uniform from center to periphery, proving conclusively the *absence* of a nucleus so far as carmine staining can prove anything.

These slides have been submitted to the scrutiny of several observers, among them Mr. A. F. Atwood, Drs. H. A. Johnson, Lester Curtis and Chr. Fenger. In every instance the result of the observation was announced before the observer was informed what specimen he was looking at, or why his observation was requested. Thus all possible bias and prejudice were avoided, although the names of these gentlemen are in themselves ample guaranty for the fidelity and accuracy of the observations. Therefore it was with great satisfaction that I heard from each an opinion coincident, in all its essentials, with my own. They observed, as I had in a few mammalian corpuscles, points of different refractive power from the rest of the corpuscle, but never any points of different staining.

The question at once arises—How are we to explain Boettcher's nuclei? It would seem to me that they are due to the action of the reagents employed. Certainly both alcohol and corrosive sublimate coagulate albumen, and alcohol extracts water. That we can secure differences of refraction and even differences in depth of staining by reagents I have proved in this way: Mucus is structureless when taken from the mouth; but when treated with Boettcher's fluid it becomes fibrillated. Now the addition of carmine solution causes an uneven staining, the fibrillæ being especially colored. Surely no one would affirm that these fibrillæ consist of nuclear or germinal matter. Yet just as these fibrillæ differ from mucus as it exists in the mouth, so blood corpuscles, after treatment by Boettcher's method, differ from blood-corpuscles in the vessels. This suspicion that Bœttcher's nuclei are artificial, receives support from recent discoveries as to the structure of nuclei. In the July number of the *Quarterly Journal of Microscopy*, Dr. Klein relates a series of observations, as a result of which he affirms the nucleus to consist of a fibrillar network imbedded in which is a ground substance; that this intra-nuclear network is continuous with a similar intra-cellular net-

work; that nucleoli are merely thickenings and shrivelings of these fibrils. The natural shrivelling effect of alcohol might readily produce a pseudo-nucleus in a blood-corpuscle from condensation of this intra-cellular net work.

Now as to the argument that the homology of tissues demands the existence of a nucleus in the red corpuscle. Does this homology require nuclei in the enamel rods and superficial layers of the epidermis? Certainly they have never been demonstrated. Indeed a nucleus would be in these situations superfluous, for the functions of the nuclei are, as we understand it, growth, nutrition and reproduction. Since neither of these processes is required of enamel or superficial epithelium, nuclei are here unnecessary and therefore absent. Now the function of the mammalian blood corpuscle is only, so far as we know, the transportation of oxygen, a purely chemical process performed as well without as within the body. The hæmato-crystallin, like other ferrous salts, is capable of uniting with oxygen, and again, under other circumstances, of imparting that oxygen. Nutrition, growth and reproduction are, to the best of our knowledge, foreign to the matured corpuscle; hence a nucleus is unnecessary and we would, *a priori*, expect its absence. This proposition is advanced, not as an argument, but simply to show the fallacy of the argument based on homology.

It would be improper to conclude this article without reference to the work of the late Prof. Freer, of this city. By the use of reflected light, Prof. Freer demonstrated in many blood corpuscles a central thickening, but failed to prove any corresponding difference in chemical composition, vitality or function—that is, failed to prove the existence of a nucleus. Hence, while authorities universally admit his demonstration as to contour, they as universally restrict his demonstration to contour. If thickness constitutes a nucleus, then the red corpuscle has a nucleus all around its periphery as well as in its center.

ARTICLE V.

A CASE OF GENERAL MILIARY TUBERCULOSIS INVOLVING THE CHOROID. By EDWARD L. HOLMES, M. D., Chicago. Read before the West Chicago Medical Society, Jan. 13th, 1879.

Through the kindness of Dr. W. T. Belfield I am permitted this evening to present to you this specimen. It is, I presume, the first specimen seen in the Northwest, which was removed from the cadaver at a post-mortem examination, for the purpose of verifying the clinical fact that the choroid is often implicated in acute miliary tuberculosis.

I believe Dr. C. Fenger, Pathologist of the Cook County Hospital, is the first physician who ever made such an autopsy in this portion of the country.

The literature upon the subject is found principally in foreign medical journals, especially in those devoted to ophthalmology.

In this special case I am informed that the patient, about thirty-five years of age, was brought to the County Hospital almost moribund, with no one to give the previous history. Miliary tubercles were found in nearly every organ of the body.

In this specimen eight minute white elevations are perceived in the posterior half of the choroid. The microscopic appearances are identical with those found in tubercle of other organs and are sufficiently well described in works on pathology.

The principal facts regarding this condition of the choroid are as follows:

1st. So far from being rarely found in the choroid, miliary tubercles find in this membrane quite a "favorite" locality for their development.

2d. They vary in size from one-third of a millimeter to two and one-half millimeters in diameter. As they are usually located in the posterior portion of the choroid, they can be recognized by means of the ophthalmoscope during life. As far as I know, however, the patients have all been on the verge of dissolution when the examinations were made.

3d. In no cases of extensive cheesy masses, confined to the lungs and abdominal organs, are tubercles found in the choroid.

4th. Whenever tubercular deposits are found in the choroid, they are of the miliary form and are present in "almost all the organs of the body," and especially in the meninges.

5th. So far as records state, no subjective symptoms have been observed. The patients have been either too young, or too near death to express complaints regarding disturbed vision. Theoretically elevations in the choroid, crowding upon the retina, especially near the macula, must cause distorted vision.

6th. Cohnheim and Graefe have shown that guinea pigs inoculated with tuberculous substance, died after a few weeks, tubercles being found in the choroid as well as in many other organs.

I may add that Manz and Graefe were perhaps the first who studied this subject. More recently tubercles have been found in the retina, optic nerve, ciliary bodies and iris in individual cases. As early as 1829, V. Ammon and others described as tubercle large masses of "cheesy" substance in the globe, which may have been produced by retrograde degeneration of malignant growths.

IN remembrance of the cordial reception and most generous hospitality he met with in the United States, and to meet the wishes of numerous friends, Dean Stanley has collected into a volume his various addresses and sermons, which Macmillan & Co. will publish in a few days; still further to increase the interest of the volume, the publishers, by the kind permission of the Dean, have been able to add a photograph portrait.

THE very unpleasant, pungent odor of iodoform can be completely masked by oil of peppermint. For instance, iodoform 2.0, vaseline 30.0, rubbed up with six drops of oil of peppermint, make an ointment with a pleasant aromatic scent.

THERE are seventeen teachers of otology at fourteen universities of the German empire, while at six universities otology has found no representation yet in the medical faculties.

Clinical Reports.

ARTICLE VI.

CHICAGO HOSPITAL FOR WOMEN AND CHILDREN.

(Reported by MARY H. THOMPSON, M.D.)

Two Cases of Placenta Prævia.

Case No. 1. Miss E. B., American, single, primipara, was brought to the hospital about noon, Sept. 10, 1878. She was in the first stage of labor, and having considerable hæmorrhage.

She said she had flowed all the morning, and that she had felt no movements during the two weeks previous to her entrance since she was injured by a kick upon the abdomen. She thought herself only in the eighth month of pregnancy.

Upon examination by the resident physician, the os uteri was found dilated about one and a half inches in diameter at the time of a pain, and occluded by a spongy mass, with what was thought to be the fœtal head behind it. She was ordered an enema, and when at stool one-half pint of clots was passed from the vagina in addition to the continuous flow. This was followed by a chill and the cessation of the hæmorrhage for an hour, when another half pint of clots was lost.

At four o'clock p. m., I was summoned and found the patient pale and the lips blanched to near the color of the face. The os uteri was about one-fourth dilated, and closed by the placenta, which was so thin upon one side that I was sure it was the circumference and that we had a case of partial placenta prævia. Through the placenta I felt the fœtal head. The flow was continuous, but more profuse between the pains.

The rule by which to be guided in the present case seemed to

be to dilate the os uteri as soon as possible, without detriment to the uterus or neighboring tissues, and to remove the fœtus. The question was, how shall it be done?

I believe the greater part of the hæmorrhage in placenta prævia comes from the uterine vessel, and that it is this portion of the hæmorrhage which imperils the woman's life rather than that from the placental vessels. There are always doubts in regard to our power of saving the life of the child, especially if hæmorrhage has existed at different periods during the last months of pregnacy. But if we save the child's life it is by saving the mother's, and terminating labor in the expeditious way consistent with this physiological process of child-birth. Hence, I determined to compress the uterine vessels in the lower zone of the organ, and if possible those of the placenta.

I inserted the tips of three fingers, in the form of a cone, into the os uteri, and spread them, detaching the placenta as far as it could be reached entirely around the margin. The circumference of the placenta being easily reached on one side, was torn and pushed back. The fingers were quickly removed, and pressure from the vaginal surface applied with the hand until after the first contraction. The fingers were again inserted and spread so at to keep the os distended or stretched out, with all the power that could be applied in such a position; but when contractions came on, the fingers were removed and rested during the time, and immediately reinserted.

The blood vessels were thus effectually closed for the time; and soon the labor pains, which were at first weak, became stronger.

To be positive that by this maneuver we were arresting the hæmorrhage, the fingers were removed twice during the periods between "pains," when the hæmorrhage began as at first.

About 5:15 p. m., the first stage terminated, and fluid extract of ergot was given in two gram doses until three doses were given. The pains were stronger for a short time, then grew so weak that the labor was terminated with forceps.

The child had been dead for some time. The cuticle was denuded in some places, and in others it hung in folds, having partially lost its connection with the body.

The mother made a slow but sure recovery.

Case No. 2. Mrs. L. H., aged 40, American, mother of four children, entered the hospital Sept. 18th, 1878. She had slight hæmorrhage and said she was near her "term;" also that she had never bled before when carrying her children. She had flowed four months previous to her entrance and at every succeeding period, also whenever she worked (as she at times was obliged to). The last time was five days ago, after ironing a little, but it ceased after lying down. On the second day after admission, and after walking about the ward, hæmorrhage came on and lasted three hours, ceasing as suddenly as it began. On the 22d, or fourth day after entrance, about four o'clock a. m., slight labor pains began and continued until eleven a. m., with only a little show, but at this time hard pains and hæmorrhage commenced.

I found no dilatation and the cervix nearly an inch thick. Had it been thinned we should have used the fingers as in the other case. Instead, we used the tampon and asked advice of Drs. E. Marguerat and J. Bartlett. They advised the use of the tampon until dilatation was effected. We made the tampon of an ordinary roll of bandage, unwinding a part, then inserting the whole, adding cotton until the vagina was full. But I soon found dilatation of the vagina going on, and hæmorrhage beginning again, unless the whole mass of cotton was pressed against the os uteri. This act not only seemed to control the bleeding, but stimulated contractions.

About half past two o'clock p. m., the tampon was removed and the colpeurynter used instead, but for a short time, however, as it was expelled after being distended to its extreme limit. The tampon was again used after an examination, which confirmed the diagnosis of central placenta prævia, for the os uteri was not only occluded by this thick, spongy body, but a portion protruded into the cervix.

At about four o'clock p. m., Dr. Marguerat returned, when I removed the tampon and by examination found the os sufficiently dilated to admit my hand. Dr. M. advised turning at once. I pushed my hand through the os uteri and placenta and brought down the feet, but then discovered that I had a full-termed fœtus to remove through the small opening in the placenta, and the insufficiently dilated os uteri. I drew down the feet, and continued

making traction, hoping the body of the child would enlarge the opening in the placenta, and that in the meantime the cervix would dilate.

The opening in the placenta was made larger, for it was torn into the membranes on one side, and the os was dilated (not lacerated), but the child gave not the least sign of respiration, though the heart beat in a fluttering way for nearly an hour.

In this case, as in the first, the mother made a good but slow recovery after the great loss of blood.

I believe that had we waited until sufficient dilatation had occurred, the child's life as well as that of the mother's might have been saved. In fact, I think too frequently the child is sacrificed, and sometimes the mother, by an undue haste to terminate labor, and that if life is not lost, the mother is injured beyond the power of surgical skill to mend.

ARTICLE VII.

COOK COUNTY HOSPITAL.

(Reported by J. H. SALISBURY, M.D.)

A Case of Cancer of the Rectum, in which Colotomy was performed for the Relief of Intestinal Accumulation.

Sailor, age 35, native of England. Admitted to Cook County Hospital, July 9, 1878.

On admission he gave the following history: About two years ago he noticed that he passed blood with his stools. He went to the Buffalo hospital, and was treated for chronic diarrhœa. He left the hospital after five months, somewhat improved, but the discharge of blood and mucus still continued. From this time until October, 1877, he followed the occupation of a sailor. He was troubled during this time with discharges of blood and slime, and occasionally he had some pain in the bowels. Otherwise he was well. In October, 1877, he entered the Marine hospital, in this city (Chicago). His disease was here diagnosticated cancer of the rectum. He left the hospital after four months, without

much improvement. Since that time he has kept himself very quiet, and his symptoms have been somewhat better. He has treated himself with carbolic acid and glycerine locally, as an injection.

For the last week previous to admission, he has had more pain in the abdomen than usual and has lost his appetite. His abdomen has swollen considerably, and he has been troubled as formerly with frequent passages of slime and blood. He states that he has lost in the last two years about fifty pounds in weight. His weight is now about 140, and varies between 140 and 160.

On examination the rectum was found almost obliterated by the projection into it of a hard enlargement of its walls. The caliber of the rectum was so small that not even a catheter could be introduced. The patient was suffering great distress from the distension of the abdomen, having had no passage for nine days. He could eat nothing.

On July 15th, Dr. Gunn performed colotomy, making an incision through the integument about five inches in length, running from a point two inches above the anterior third of the iliac crest obliquely upward and backward. After dividing a few fibers of the latissimus dorsi, the operator found, between that muscle and the peritoneum, just at the edge of the quadratus lumborum, a quantity of loose fat, by the removal of which the colon was exposed. Two ligatures were passed through the bowel, which was divided between them. The edges of the wound were then stitched to the edges of the external incision. Considerable soft fecal matter and gas escaped, and the patient expressed himself much relieved. He recovered readily from the operation. The bowels discharged their contents through the artificial opening usually regularly; occasionally a cathartic was required.

About the middle of August the patient began to complain of great pain in the rectum, and to pass blood and slime again. Aug. 26th, a note is made that he passed blood and strands of dead tissue. Oct. 18th. Has difficulty in urinating, passing only a small stream and with pain. The pain continued to increase, and became so severe that for about three weeks before death he received daily four hypodermic injections of morphia, of $\frac{1}{2}$ grain each. Nov. 2d, he had a chill. For about two weeks before death he had œdema of the left leg. Nov. 11th. After three

copious discharges of blood per rectum, the patient expired from the exhaustion of the hæmorrhage.

Autopsy 12 hours after death. Very little fluid in the serous cavities. Heart normal but very anæmic; lungs normal and anæmic; one of them a little œdematous. Lower two-thirds of the peritoneal cavity filled with the enormously distended sigmoid flexure of the large intestine. The whole peritoneal surface, both visceral and parietal, is covered with thousands of fine, white, cancerous nodules, varying from the size of a mere dot to that of a small pea. In the parietal layer of the peritoneum, in the right iliac fossa, is a patch of diffuse, confluent, small white masses.

The finger passes from the artificial opening readily upward, into the descending colon, but not downward into the part below. The gases and other contents in the distended part below do not escape at this point when pressure is made on the gut. The artificial anus is found to open into the colon at the portion not covered by the peritoneum, leaving this membrane untouched. Extensive adhesions between the distended bladder and sigmoid flexure from continuous cancerous growths. The ureters very much distended, especially the right. The pelves of both kidneys likewise distended; kidneys much enlarged from hydro-nephrosis, pale and light-colored patches are found in their tissue which look like cancerous infiltration. The left common iliac vein is obliterated from a point an inch above Poupart's ligament to within an inch of its junction with the other, by cancerous growths from adjacent portions of the parietal peritoneum. The lower part of the pelvic cavity is filled with a general, diffuse, cancerous growth, involving all the viscera and the cellular tissue, forming a firm mass, which has broken down in one place and formed a cavity of the size of two hen's eggs. In the wall of the cavity may be found the opening of one of the branches of the internal iliac artery, from which the hæmorrhage proceeded. The bladder distended, walls hypertrophied, openings of the ureters closed by cancerous infiltration, the prostate enlarged from a similar growth. The liver, spleen and brain were very anæmic, but otherwise normal.

ARTICLE VIII.

MERCY HOSPITAL.

(Reported by F. E. WAXHAM, M.D.)

Case I.—*Retro-Œsophageal Abscess.*

Mary B., æt. 27, entered the hospital June 11th, 1878. She complained of a very severe cough, which seemed to be paroxysmal in character, and had existed only for a few days. These paroxysms were very distressing, and seemed to be aggravated by exercise. Anti-spasmodics were given, but without affording relief. In a few days there began to be obstruction to the passage of food into the stomach. Pain became excessive. The patient said she felt as if there was a large swelling in the œsophagus. In a short time she began to vomit, and everything taken into the stomach was rejected. She refused to take enemas, and became greatly exhausted. Her pulse fell to 44 per minute, and it was thought that she could hardly live from one day to another. It was supposed that she was suffering from cancer at the cardiac extremity of the stomach, and she was placed upon appropriate treatment.

July 11th. Vomited about a pint of sanguineo-purulent matter. She also had several purulent discharges from the bowels. July 12th. Very much better; vomiting had entirely ceased. Her appetite returned, and food retained. July 20th. Discharged cured.

Case II.—*Laryngitis with Œdema of Glottis.*

Frederick Hager, æt. 43, entered the hospital July 8th, suffering from simple laryngitis with œdema. Breathing extremely difficult and irregular. He was obliged at times to stand, place his hands to his sides, and struggle for breath. Voice hoarse and jerky; some cough. The inspiration required much more effort than the expiration. The disease commenced four days before entering, but was quite mild until the day previous, when he suffered greatly from dispnœa. His attending

physician stated that he received during the day 0.48 grams of croton oil without effect. He also received a topical application of a strong solution of nitrate of silver, which increased the difficulty of respiration, threatening suffocation.

Upon entering the hospital a mustard plaster was applied to the chest, and a solution of persulphate of iron, 4 grams to water 64 grams, applied to the larynx and glottis by means of a sponge attached to a staff. This greatly increased the dispnœa for the time, but was frequently repeated, and seemed to afford relief. All preparations were made for performing tracheotomy, and the patient closely watched during the night.

July 9th. Considerably better; still continued the application of the persulphate of iron every two or three hours. July 12th. Considered out of danger. July 13th. Greatly improved. July 15th. Left the hospital cured.

Case III.—*Psoriasis Diffusa.*

Dennis Donahue, æt. 50, laborer. The patient entered the hospital October 9th, with general inflammation of the skin, with profuse desquamation, the cuticle coming off in the form of pearly white scales from head to foot, and leaving the cutis very red. Bowels generally regular; appetite good. General health fair. Temperature normal. Pulse 108. Last spring the patient was attacked with lichen tropicus, extending over the entire body. Following this was an attack of chills and fever. The entire skin became dark in color, and the epidermis came off in large patches. The skin then became almost natural, scaling only on portions of the body. About a month previous to entering the hospital, the disease rapidly spread over the entire body, and since then complete desquamation has been taking place. Patient complained of a constant itching, and was continually rubbing off the scales. These were rapidly reproduced; one pint of these scales were collected during a period of twelve hours.

Treatment—He was directed to take Fowler's solution, 0.48, after meals, and to anoint his body thoroughly at night with oleum ricini. Oct. 12th. As he did not sleep well, he was directed to take 0.6 chloral hydrate, with 1.2 potassic bromide at night.

October 25:

℞ Olei Morrhuæ 200
Hypophos. sodæ 10
Hypophos. calcis..... 10
Aquæ calcis..... 200
Gummi acaciæ. q. s.....

M. et sig. Tablespoonful after meals.

For local application, he received a lotion of acetate of lead one gram, and borax two grams, in 100 grams of water.

Nov. 2d. Face begins to look quite natural, also his breast and arms, but his hands and feet show but little improvement.

Nov. 4th. The patient left the hospital, much improved.

NOTES FROM PRIVATE PRACTICE.

ARTICLE IX.

An Interesting Case of Placenta Prævia.

I was called on the eleventh of November at half-past seven in the evening to see Mrs. P——, a lady twenty-two years of age, who had been in labor for twenty-four hours, under the care of a midwife.

I found the patient much exhausted from hæmorrhage. Upon examination I found a large quantity of blood in the bed, and presenting at the os an arm, a shoulder and a portion of the placenta. The remaining portion of the placenta was attached to the left side of the uterus.

I introduced my hand and completely detached the placenta, then bringing down the foot completed the labor in about five minutes, delivering the woman of a healthy child.

The detachment of the placenta checked all hæmorrhage, and by rapid delivery the child was saved. The mother made a good recovery.

DAVID DODGE, M. D.
152 WEST TWELFTH STREET, CHICAGO.

Society Reports.

ARTICLE X.

CHICAGO MEDICAL SOCIETY.

Meeting Feb. 3d, 1879, Dr. Hamill in the chair.

DR. F. C. HOTZ read an essay entitled: "Observations on Defects of Sight, induced by Exposure to Excessive Heat." In the latter part of last year a number of persons came under his care with defects of sight, which they noticed sooner or later after the very hot days in July. Two of these patients were not exposed to the direct rays of the sun, but were prostrated by the heat while working in hot rooms. The other patients were overpowered by insolation. They became dizzy, fainted and some were unconscious for several hours. The direct effect of the heat was a violent headache, lasting from several days to several weeks. During this period of headache the patients (except two) did not observe any visual disturbances; but after the headache ceased, vision became more or less indistinct. The ophthalmoscope revealed marked changes in the fundus oculi, viz.: in five cases neuro-retinitis, in one case choroiditis, with subsequent detachment of the retina. A careful analysis of his observations lead the reader to the view that the immediate effect of the excessive heat in these cases, was a hyperæmia of the meninges, in some cases bordering on inflammation; this hyperæmic or irritative state was propagated through the sheaths of the optic nerve to the eyeball, where it induced the neuro-retinitis or choroiditis. In support of this view the essayist adduced Schwalbe's anatomical investigations into the connection of the lymph spaces of the optic nerve with the sub-arachnoidal space; and analogous clinical observations which proved the fact that an inflammatory process of

the meninges has been directly propagated to the eyeballs by the described route.

It was also stated that even the latest text-books on diseases of the eye do not speak of sunstroke as an indirect cause of visual disturbances.

In the discussion which followed, Dr. Montgomery said that, like the reader, he could not but be surprised at the almost entire lack of any literature on the subject. He reported a case of hyperæmia of the fundus oculi coming on suddenly after exposure to heat. He mentioned also two cases of retinitis due to observing the eclipse of last summer without the protection to the eyes of smoked glasses.

DR. INGALS read a paper comprising a series of questions suggested by Dr. Sawyer's case of partial inversion of the uterus, reported in our January number. These were made the special topic of discussion for the next meeting.

DR. STARKWEATHER gave an un-official account of the work done by the State Board of Health. He stated the entire number of certificates issued to graduates and midwives as 4,171, while to those exempted under the ten-year clause, 942 certificates had been issued. He also gave an account of the efforts now making to repeal the laws creating a Board of Health and regulating medical practice, and thus open the field to every irregularity, as formerly.

ARTICLE XI.

THE WEST CHICAGO MEDICAL SOCIETY held its regular meeting at the Washingtonian Home, Feb. 10th, Dr. Bridge in the chair.

Dr. E. W. Lee related a case of fracture of the neck of the femur, in a boy ten years old. After sustaining the injury the lad walked home, a distance of several blocks; indeed, he was able to walk for two days afterwards, not being compelled to keep his bed until the third day after the injury. There was no suspicion of fracture until the third week, at which time Dr. Lee

was called in, and discovered an extra-capsular fracture. In response to a question, the doctor stated as his explanation of the case, the presumption that there had been impaction of the shaft which persisted for the time during which the boy used the limb.

In the discussion which followed, Dr. A. H. Tagert mentioned a similar case. A man about 50 years of age was pushed from the platform of a street car, falling in the stony street upon his hip. He arose and walked home, a distance of ten blocks. He was subsequently found to have sustained a fracture of the neck of the femur, the limb being 2 inches shorter than its fellow.

Dr. Bridge exhibited Bartlett's forceps, for application at the superior strait. Several advantages were pointed out, among them the fact that the axis of traction could be easily made parallel to the axis of the superior strait. The instrument was the object of considerable criticism, both favorable and adverse.

Dr. Lee exhibited a splint for fracture of the femur, in which counter-extension was secured by taking advantage of the conical shape of the thigh. No perineal band is needed. The advantages claimed are mobility of the limb, simplicity of dressing, security of the extension. While originally designed for children, it had been used, to the doctor's entire satisfaction, on adults.

ARTICLE XII.

MICHIGAN STATE BOARD OF HEALTH.

The regular quarterly meeting of the State Board of Health was held in Lansing, on Tuesday, Jan. 14, this being its first meeting in its rooms in the new capitol building. The following members were present: R. C. Kedzie, M.D., President; H. O. Hitchcock, M.D., Hon. LeRoy Parker, Rev. D. C. Jacokes, and Henry B. Baker, Secretary.

ADULTERATION OF SUGARS, SYRUPS AND HONEY.

As committee on foods, drinks and water supply, Dr. Kedzie made a verbal report on table sweets, showing the methods of adulteration now practiced. One of these is by the

use of glucose, which is an inferior article of sugar, formed by the action of sulphuric acid on starch. In sugars thus adulterated, there is usually found sulphuric acid and copperas. Another method lately practiced has been for the lessening of duties, and consists in coloring sugar, so as to make it appear of lower grade. The danger comes from the poisonous chemicals used in bleaching. Dr. Kedzie also mentioned the fact that where bees are fed on glucose, this substance will be deposited in the cells without change. In connection with the adulteration of sugar, the doctor also said that one bushel of corn would make about 40 pounds of grape-sugar or glucose. Where the sugar is of a blue tinge, it is an evidence that blueing has been added to the sugar to relieve the yellow appearance due to the adulteration. The experiments and reports heretofore made by Dr. Kedzie had been made the basis of a memorial to congress, asking legislation upon the subject.

VENTILATION OF BUILDINGS ALREADY CONSTRUCTED.

The committee on the subject of ventilation and heating of buildings, Rev. Dr. Jacokes, read a paper on the heating and ventilation of buildings already constructed. He first showed the importance of good ventilation, and then pointed out many ways in which buildings already constructed, faulty in this particular, could be improved. One method was the leading of fresh air from outdoors to a jacket enclosing a space around a stove, and withdrawing the foul air from the floor level by means of pipes which lead from near the floor to the chimney above. He showed many diagrams illustrating the methods of improving the ventilation in buildings already constructed. He gave one illustration of a church which had been insufficiently warmed by three stoves, but which was afterwards thoroughly warmed and ventilated by one of these stoves, properly jacketed, and the cold and foul air withdrawn from the floor level. The ventilation of two churches by a similar method cost but $10, and ventilating apparatus for dwellings cost from $1.25 to $10.

ILLUMINATING OILS.

As committee on special sources of danger to life and health, Dr. Kedzie made a verbal report on illuminating oils. In this report he brought before the Board a sample of "mineral seal" oil, a new brand, which stands a flash test of 260 degrees, by the Michigan method, and will also stand the Michigan chill test. He exhibited a lamp filled with this oil, which gave a brilliant light equal to twenty-six railroad candles. This oil is manufactured for the Standard Oil Co., in Cleveland. It sells for forty cents a gallon. It is made by freezing the paraffine out of heavy paraffine oil. He recommended the use of this oil on railroad cars under very stringent provisions. He showed the safety of the oil by heating it to 254 degrees and plunging lighted pine sticks into it, when they were immediately extinguished.

He also brought up for discussion the question as to what action the Board shall take with reference to illuminating oil for ordinary purposes. As showing the ways in which certain parties seek to evade our laws, he exhibited a specimen of oil and the dealers' circular in connection with it, claiming a new and safe illuminator called "potalene." It was on exhibition at the State Fair, pleading for a premium. He put fifteen drops in a heavy glass bottle and touched a lighted match to the mouth of the bottle, when the flames and smoke shot several feet high. He said this oil was simply naphtha in which potatoes had been soaked.

It was voted that the interests of life in this State will be subserved by maintaining the present tests for illuminating oils. Dr. Kedzie was requested to make a thorough investigation of the whole subject, and to act for the Board in endeavoring to maintain the present tests.

REGULATION OF MEDICAL PRACTICE.

LeRoy Parker, committee on legislation in the interests of public health, read a report on the subject of the Illinois law regulating medical practice, and on the proposal to regulate the practice in Michigan. The Illinois law compels an examination by a State Board, and the effect is to drive quack doctors out of the

State, and some have come to Michigan. He recommended the enactment of a law by the Michigan Legislature, requiring practitioners to undergo examination.

Dr. Hitchcock presented the form of a memorial to the Legislature on the same subject, expressing the opinion that great injury is being done to the health of many persons in this State, and that many deaths occur because of treatment by ignorant and unscrupulous pretenders, bearing the name of doctor, with perhaps the title of "M. D." He recommended an examination of practitioners in anatomy, physiology and pathology of the human body, and in chemistry and botany.

The memorial was adopted.

SANITARY TOPOGRAPHY.

LeRoy Parker made a verbal report on a memorial to the legislature on the subject of topographical survey of the whole State for sanitary purposes. Dr. Baker was added to the committee and it was recommended that the survey should not only be topographical, but should embrace all sanitary subjects, especially those relating to water, as, for instance, drainage, pollution of streams, water-supply, etc.

SANITARY CONVENTION.

Dr. Baker, who was a committee to prepare for a sanitary convention at Coldwater, reported that owing to the death of Dr. J. H. Beech of that city, the local support to the movement was withdrawn, and it was impossible to hold the convention. Much work has been done in preparing for this meeting, and he had endeavored to secure such a meeting at some other place. A communication was received from Dr. J. H. Kellogg, of Battle Creek, inviting the Board to hold a meeting at that place, pledging the support of the citizens of that city to make the meeting a success. The subject was postponed to the April meeting.

A committee was appointed to draft resolutions relative to the death of Dr. Beech, and its chairman, Dr. Hitchcock, presented the following preamble and resolution which was adopted by the Board.

"WHEREAS, We have heard with deep regret of the death of Dr. J. H. Beech, of Coldwater; therefore,

"*Resolved*, that in the death of Dr. Beech this Board has lost one of its most interested and efficient correspondents, and the people of the State have lost one of their most intelligent, earnest and practical sanitarians."

DIPHTHERIA STATISTICS.

The Secretary presented reports from Dr. E. N. Palmer, of Brooklyn, Jackson County, relative to the outbreak of diphtheria in that section. During a period of five months, there were sixty-seven cases and eleven deaths. He gave several instances where diphtheria had been communicated by persons convalescent from that disease; also, by persons who did not have the disease at all, but were in attendance on patients.

The document on the prevention and restriction of diphtheria, issued by this Board, has been in great demand, not only in Michigan, but throughout other States and Territories.

DRAINS AND SEWERS.

Dr. Baker presented a communication from A. C. Sekell, City Surveyor of Grand Rapids, transmitting rules and regulations of the Board of Public Works, in that city, with reference to house-drains and sewers, and moved for the preparation of a circular asking the facts concerning the regulation of drains and sewers in the cities of Michigan, and also the views of sanitary experts and engineers, with a view to making some general recommendations for the benefit of the many small cities and villages now just beginning to consider the subjects of drains and sewers.

By request of members of the Board of Control of the State public school, Dr. Baker presented the subject of the temporary maintenance of diseased and crippled children at the State Hospital in Ann Arbor, as a means of preventing sickness and pauperism in after life.

After the auditing of bills incurred during the past quarter, and the transaction of other necessary business, the Board adjourned to the annual meeting, April 8, 1879.

Foreign Correspondence.

ARTICLE XIII.

CLINICAL NOTES FROM LA CHARITÉ, OF PARIS.

The two most popular teachers of clinical medicine in Paris are Prof. Germain Sée, of the Hôtel-Dieu, and Prof. Hardy, of La Charité. The wards and lecture rooms of both these men are always crowded. The former is perhaps more widely known as a writer and lecturer than the latter, but among the students and members of the profession generally in Paris, Prof. Hardy is looked upon as the more reliable teacher of the two. While Prof. Sée is ever launching out into some new field in pathology and therapeutics, Prof. Hardy is more inclined to teach thoroughly such facts in medicine as are well settled and beyond controversy.

Enquiring of a French professor in another department of medicine as to which of these men would prove most beneficial as an instructor, he said, "Prof. Sée is a man who has always a hobby, and consequently his teachings are not always reliable. On the other hand, Prof. Hardy is ever trustworthy, and his observations can be more implicitly relied on." As the readers of the JOURNAL will probably remember, in 1877 I gave Prof. Sée as authority for some glowing statistical results of the treatment of rheumatism with the salicylate of soda. Since that time I have taken some pains to compare these with those obtained in the other hospitals of Europe that I have visited, and while such results are not generally so good as those given by him, I think it can be safely said that we have in this remedy an agent far superior to anything before known to the profession as an anti-rheumatic.

Among the new ideas that Prof. Sée enthusiastically enun-

ciated during the first part of his lecture course last fall, was the curability of certain forms of cirrhosis of the liver by the administration of large doses of the iodide of potassium, and the successful treatment of morbus Basedowi by the continued use of the tincture of veratrum viride.

Prof. Hardy, in his introductory address to his class, laid great stress upon the importance to every student of medicine of his being well grounded in two subjects: *pathology* and *diagnosis*. These two branches of medical science, he said, were the compass and the rudder that would guide to the desired haven in our profession. Without them, one will find himself adrift upon an unknown sea, beat about by every changing wind. While the way to study pathology was clear and apparent to all, and men would generally pursue it with tolerable diligence, he found considerable difficulty often in making good diagnosticians of his students.

The first cause of this failure was that many could not be made to comprehend the importance of the subject. But the second and most general reason for failure was that they early imbibed a notion that they were possessed of a certain intuitive instinct that enabled them to diagnosticate a case after the most superficial and cursory examination. "I have seen," he says, "all through life, men old and young who claimed to be endowed with such an intuition; but I can assure you that it was always a mistaken idea. Every now and then these men make some woeful blunder, that blasts their own fame and brings disgrace upon our profession. That man will ever make the best diagnostician who studies his subject most thoroughly and thinkingly, and observes with the most scrutinizing eye every morbid phenomenon in the case that he is called to investigate."

SCARLATINA.

An adult female patient, aged 37 years, was admitted to La Charité, Nov. 20th, 1878, suffering from a tolerably severe attack of scarlet fever.

Prof. Hardy, in lecturing at the bedside of the patient, made in substance the following remarks worthy of note:

"Of the exanthemata, this disease is least likely to recur

a second time. Treatment should be expectant or symptomatic. In all mild cases we have absolutely *nothing* to do. It is only when we have the supervention of some complication that we are called on to interfere. Among the complications that may arise in the course of every case, and especially every severe one, and which will call for our active interference, is that of an extremely high temperature. During my professional life I have watched many cases anxiously, and all went well until suddenly a temperature of 40.5 or 41 was attained.

"If I happened to see the patient only a short time after the supervention of such hyper-pyrexia, there would be perhaps nothing else about the case to excite apprehension or alarm. I would leave the house in the evening with a promise to call the next morning, but within the next few hours, say from six to ten after my departure, I would be summoned again, to find my patient either wild and delirious or in a condition approaching that of coma.

"After this state of things supervened, I had not seen for years a single case recover, until I adopted the course of treatment which I shall presently recommend. It was formerly thought that these nervous manifestations, and especially that of stupor, were caused by uræmic poisoning.

"But later investigations have proven that this is not the case. They have demonstrated that all kidney complications belong to the later or desquamative stage of the disease.

"These symptoms, denoting a fatal implication of the nervous centers, are produced by extreme heat of the body, and to the combating of this condition we must direct our treatment.

"What are we to do? Give medicines? I can assure you that we have no remedy in the materia medica that will exert the least influence in preventing a fatal termination in such a case as this. There is one thing, and one only, that you can do with a hope of saving life, and that is, immerse the patient at once in a cold bath of from 18° to 20°, and repeat this bath sufficiently often to bring the temperature down. If you do this early, and do it thoroughly, you may be successful. If you vacillate, your patient will assuredly die.

"Great care should be taken in the after management of

scarlatina in cases of adults, for while they generally have the disease in a much milder form than do children, and are less likely to die in the acute stage of the disease, they are much more likely to have nephritis as a sequel, and such a complication with them is much less amenable to treatment than among patients during the first years of life.

"My rule is to confine children to the house for one month after an attack of scarlet fever, and if adults follow my advice, they will not expose themselves to any vicissitudes of temperature for at least two months after apparent recovery from this disease."

TYPHOID FEVER.

On November 21st, 1878, Prof. Hardy lectured on the following case:

Jean Drowin, aged 17 years, was admitted to the wards of La Charité Nov. 14th. When questioned as to his symptoms, he simply complained of a general feeling of malaise; he suffered no pain, and nothing of a morbid character could be discovered by the most careful physical examination. He had no diarrhœa nor tympanites, but had some appetite.

"When this patient came under observation, we had to hold our diagnosis in reserve. In fact, we were unable to tell with what disease we had to deal. His temperature for the first five days following his admittance I have had written out on that large card placed upon the wall, so that all may see it at a glance."

It was as follows:

Nov. 14th,	morning,	37.4;	evening,	38.2.
" 15th,	"	37.6	"	38.7.
" 16th,	"	38.	"	39.
" 17th,	"	38.4	"	39.9.
" 18th,	"	38.7	"	40.
" 19th,	"	38.8	"	40.1.

"This temperature curve, gentlemen, corresponds to but one disease, and that is typhoid fever. To further verify our diagnosis, I will heat a small portion of the patient's urine, which you see contains a trace of albumen.

"Another point that would assist us if we were still in doubt

as to the nature of the disease with which we have to deal, is the fact that this lad had been only six months in Paris, and according to my observation, persons of this age who come to this city from the provinces and inhabit the quarter in which he lives, are very likely to have an attack of typhoid fever as a kind of acclimating process.

TREATMENT.

"If the last quarter of a century has taught us anything in medicine, it is this fact, that all active treatment in the management of infectious diseases, such as the one under consideration, erysipelas and the like, with a view of cutting them short, is utterly futile, and if such treatment disturbs in any way the natural functions of the body, it is absolutely injurious.

"When this patient entered the hospital he was costive, and hence we gave him a mild cathartic of carbonate of magnesia and syrup of rhubarb. More than this, we did not think it best to do at the present time. We find that his temperature has a tendency to remain at and exceed 40° during the exacerbation of his fever. We shall now direct our attention to the reduction of this patient's temperature.

"To effect this object we shall use cold water. The next question that arises is how are we to use this agent. Many, especially the Germans, are in the habit of immersing their patients in a cold bath. To this practice I object on two accounts:

"First, to carry it out well, we must have bath-rooms and bath-tubs annexed to each ward, thus increasing the expense and labor connected therewith.

"Second and chiefly, I object to repeated baths for typhoid fever patients on account of the disturbance and muscular effort that is connected with their administration.

"Instead of this practice we shall have our patient sponged off with cold water of from 10° to 15° every two to four hours during the height of his fever. But a practice that I have lately followed, and which I can strongly recommend is the injection of cold water into the rectum. For this purpose I use water of about 12° and to each injection I add two grams of salicylic acid. The quantity that I use is from 500 to 1,000 grams, according as the patient can contain it. These injections we try

to induce the patient to retain from thirty to sixty minutes and repeat them every four to six hours. Some have even recommended them to be given at the freezing point, but this extreme cold we have always found to disturb the patient's nervous system."

Prof. Bernutz who has charge of the gynæcological wards in this hospital, has also one male ward that is devoted largely to typhoid fever cases. I followed him for three months and will give the two following cases as examples of his management of this disease:

Y. L., aged twenty-seven years, a waiter in a café, was admitted to the wards Sept. 15th, giving a history of diarrhœa and alternate sensations of heat and chilliness for ten days before he entered. On the day of his entry his morning temperature was 38 and evening 39.1. For the next six days after his admission the course of the disease was not marked by any special phenomenon, except that his diarrhœa was rather excessive, the discharges amounting to from eight to twelve in the twenty-four hours. The entire treatment during this time consisted of one half gram each of sulphate of quinia and tannin given night and morning.

On the 25th, or ten days after he came in, the slight bronchial irritation from which he had lately suffered became worse, he was harrassed by an irritating cough so that he got but little sleep day or night. At this date, a solution of the acetate of ammonia, sweetened to a syrup and to which was added a small quantity of ipecacuanha, was prescribed as an expectorant. On the 27th the lower lobe of the right lung was found consolidated, his pulse was 130 and weak, his temperature was 40.2 and his hands were slightly cyanotic. On the 28th his pulse was 135, temperature, 40.5, respiration 40, and the cyanotic condition of his extremities was more marked.

He was now ordered sixty grams of brandy and two grams of quinia every twenty-four hours. The patient gradually grew worse and died on the 30th.

On the 1st of October the autopsy showed both lower lobes of the right lung in a condition of red hepatization, the spleen enlarged to four times its natural size, studded with infarcted spots and soft in texture. The glands of Peyer in the vicinity of the

cæcum, extending also for one and a half centimeters into the ileum, were either ulcerated or congested and swollen.

On October 15th, G. Golosko, a Russian, aged 21, was brought from his hotel into one of the private wards of La Charité, under the service of Prof. Bernutz. He had been sick for two weeks before he was admitted, and had the petechial eruption and other distinctive symptoms belonging to a true case of typhoid fever. He had but little diarrhœa, but suffered extremely from headache and an harrassing, tickling cough. His morning temperature was 38.2, evening 39.6. He was put on a slightly acidulated solution of muriatic acid, flavored with lemon-juice, and one gram of quinia in the twenty-four hours. The acid given was not in a sufficiently large dose to be considered in the light of any medication. The patient not being able to speak French, but speaking German, I acted as interpreter between him and his physician and nurse, and so had to visit him two or three times a day.

On the second day that I made my visit to him in company with Prof. B., he appealed to me for the sake of heaven to ask the doctor to give him something to ease his head and check his cough. Communicating his wishes to the Professor, he replied that "all was being done for him that could be done." I then asked (in a modest way) whether some mild form of opiate, say a Dover's powder at night, might not act well by easing the patient's headache and arresting his cough. His reply was: "I never give opiates or any form of anodyne in typhoid fever on account of its tendency to obstruct the action of the heart. I think it a matter of the first importance that nothing should be done in this disease to cripple the great center of circulation, and this I think opiates have a tendency to do."

Some years ago a celebrated Professor of materia medica, by means of the sphygmograph, demonstrated to me that the effect of both opium and digitalis upon the circulatory system, is to increase the muscular contractility and force of the heart's action, as well as the blood pressure in the arteries; yet this venerable old man, who has practiced his profession for half a century, and has made a name that is known the wide world over, tells me positively that both these remedies have exactly the opposite effect

to that which I have been taught to believe that they possessed.

This patient began to convalesce slowly on the 30th of October, and was discharged on the 16th of November, or one month after his admittance.

ACUTE RHEUMATISM.

Léon Patry, aged 21 years, a painter by trade, was admitted to LaCharité Oct. 10th, 1878, suffering from acute poly-articular rheumatism. Eight days before his admission, he began to have pains in his joints, chilly sensations when he came in contact with currents of cold air, and a general feeling of malaise. On making his regular visit to the wards, at the date above mentioned, Dr. Dieulafoy (inventor of the aspirator that bears his name) lectured at the bed side of this patient. He said:

"This is a good type of acute articular rheumatism. The patient had some ill-defined symptoms for several days previous to his entry into the ward, but three days ago he was taken violently ill. His knee and ankle joints on both sides are much swollen and extremely painful. His temperature is 40.3, his pulse is 130, and his respirations are 45 per minute. From the anxious aspect of this patient and his extreme dyspnœa, it is evident that he is suffering from some impediment to his respiration, his circulation, or both. The careful physical examination of his case which I have just made, and which, if the patient is not too much fatigued, I will allow you all to verify, reveals the following conditions: Placing the stethoscope at the junction of the fourth rib, with the sternum on the left side, we hear a dry friction sound *bruit de frottement*. This sound is synchronous with both the systole and diastole of the heart. By making a pretty firm pressure with the stethoscope it is considerably increased in intensity. This sound to which I first call your attention, is peri-cardial in character, and, being a dry sound, it proves the existence of pericarditis in the first stage. I want you all to study this sound well, not only now, while we have the first stage of this disease, but later when the sound will probably be altered in character by an effusion of fluid into the peri-cardial sac. It is one of the conditions that men who are not skillful in physical diagnosis constantly overlook. If we place the stethoscope over

the point where we see the apex beat, we hear another sound, *bruit de souffle*, which is synchronous with the ventricular systole. The sound that we hear at this point is endo-cardial in character, and is produced by an impairment of the function of the mitral valve, showing the existence of an endo-carditis. We will now allow the patient to sit upright, and examine his chest to see whether we cannot find some lesion in this region. Synchronous with the respiratory movements of the lungs, we hear a friction sound on both sides, which is dry throughout on the left side, but is moist at the lower portion of the right.

"We have then in this case, beside the general affection of the joints, a peri-carditis, an endo-carditis, and a double pleurisy with a slight effusion into the right pleural cavity. A point to which I wish to draw your attention in connection with this case is the morbid phenomena that we have found situated in thoracic cavity. By most writers and teachers, whenever a rheumatic inflammation attacks any part of the body other than the articular surfaces of the joints, we are taught that such manifestations of the disease are to be looked upon as accidents or complications. This idea is an entirely erroneous one. The disease may attack any of the fibrous tissues of the body, but has a preference for the fibrous structures that go to make up the linings of the various serous cavities. Therefore an endo-carditis is no more a complication of rheumatism than an inflammation of any one of the joints of the extremities.

"The pleurisy we have in this case is one of the accompaniments of this disease that may be very easily overlooked, for, strange as it may seem, the suffering from this form of pleuritis is not as great as in other forms of acute pleuritic inflammation. The effusion is also much more likely to be rapidly absorbed than where it originates from other causes.

TREATMENT.

"The first remedy, that occurs to every physician at the present day, in connection with the management of a case of acute rheumatism, is the salicylate of soda. In this case we will not give this drug, and for this reason. Its physiological action is to lessen the contractile force of the heart and to decrease the

blood pressure in the capillaries; and as we have in this case already a crippled heart, accompanied by a cyanotic condition of the skin in the extremities, we consider the salicylates as contra-indicated. Were the heart and its investing membranes unaffected, we should give this remedy in full doses, and expect a good result from its administration. We shall give this patient for the next twenty-four hours:

Digitalis leaves		50
Sodic bicarbonate	4	
Quinia sulphate	2	
Camphor		20

"The digitalis to be infused in 100 grams of water, one-fourth to be taken every 6 hours. The bicarbonate of soda we will give also in four doses, each dissolved in 200 grams of water, flavored with syrup of raspberry. The quinia we will give in 0.50 gram doses, and the camphor we shall give in two doses, one night and morning."

The record of this patient's highest temperature, respiration and pulse was as follows for the days here given:

Oct. 11th.—Temperature, 40; pulse, 125; respiration, 46.

Oct. 12th.—Temperature, 39.5; pulse, 121; respiration, 44.

Oct. 15th.—Temperature, 38.6; pulse, 104; respiration, 34.

At the last date the quinia was reduced to one gram in the 24 hours.

Oct. 22d.—Temperature, 38; pulse 100; respiration, 25. At this last date the acute symptoms had mostly subsided. The patient was free from pain, there was a slight peri-cardial and pleuritic effusion, and the endo-cardial murmur was a little more accentuated than when at the first examination. The sodic bicarbonate was now discontinued, and the iodide of potassium given in its stead. He was also given a small amount of claret wine.

Oct. 31st.—Temperature, 37.2; pulse, 90; respiration, 20. The patient was now pretty comfortable sitting up in bed, but had still a loud mitral, regurgitant murmur. I omitted to mention in the right place that the patient had a large cantharides blister applied over the heart, on the 12th of October. He left the hospital on Nov. 9th, free from pain but feeble and still

showing the mitral lesion that came on during the first days of the attack.

I will close this article with the following brief account of a case of acute rheumatism that I have under observation at this date, Feb. 1st., at the Charité, of Berlin. J. Kapp, a young man aged 20 years, was admitted on the 9th of January last. He had always enjoyed good health excepting a former attack of this disease, for which he had been treated in this institution two years ago, and from which he entirely recovered.

Prof. Frerichs brought this patient into the lecture-room on Jan. 11th, and the following is a brief summary of some of the points made in his discourse at his bedside.

The disease is not generally ushered in by a chill. It usually approaches somewhat insidiously, so that the patient is unable to say exactly when he was taken ill. The nature of the disease has been a subject of controversy from the earliest times.

Chemical changes in the blood, small emboli going out from an ever supposed endo-carditis, and an infectious poison are among the causes that are supposed by different authors to produce this affection.

As to the first two supposed causes, they rest on hypotheses only, with no proof whatever to substantiate their truth. As to its being an infectious disease, that he thought entirely improbable, as the affection had no regular course or limit of duration, which was a characteristic of diseases of that type.

The best course, in the present state of our knowledge on this subject, is to own frankly that we do not know what is the true and intrinsic cause of this disease.

TREATMENT.

There is no disease in which it is so difficult to test the efficacy of remedies, as the one we have under consideration. The reason of this is obvious. The case may terminate in spontaneous convalescence in 24 hours, or it may run as many days or even weeks. Hence it is that all manner of remedies have had a reputation in turn for the cure of rheumatism. He would not even burden the mind, he said, with an attempt to recapitulate these agents, excepting so far as related to those that had not

fallen entirely into disuse. The alkalies and lemon juice were highly extolled by the English, and the former was even thought to be a specific by Dr. Fuller and some other medical authorities in the British islands.

For his part, after an extended trial, he had little faith in either, but gave the lemon juice the preference because it was sure to do no harm and was pleasant to take. The last remedy that had been recommended in the treatment of this disease, and with which he was now experimenting, was the salicylate of soda. "To this patient we will give .50 grams of this drug every hour, and see how the case will terminate." The highest temperature for the days here mentioned was as follows: Jan. 11th, 39.8; Jan. 12th, 39.2; Jan. 13th, 37; from the 14th of January to the 18th, 36.8.

As will be seen, after two days' administration of this drug the patient was in every way better; his pain had disappeared and he was entirely comfortable.

On the 14th, however, the salicylate was discontinued and .25 grams of sulphate of quinia three times a day substituted in its place.

On the 19th there was a sudden change for the worse; the left knee and elbow joints became swollen and inflamed, and the temperature showed for the next days thus: 19th, 39.6; 20th, 40; 21st, 39.8; 22d, 40; 23d, 40; 24th, 39.5. At this last date the patient was brought before the class again, and Prof. Frerichs said that in the first outset of the disease the salicylates had *seemed* to do good, but the remedy had now been given for five days, viz., from the 19th to the 24th, in doses even as high as 1 gram per hour, with no apparent benefit. He further said that if the temperature rose again to 40, and seemed inclined to remain at that point, he should begin the use of the cold bath, which he always did when drugs failed him.

For the next week this unfortunate man was used as material by Dr. Litten, to illustrate to his class in physical diagnosis, both dry and moist peri-cardial and pleuritic sounds, as well as mitral regurgitation and aortic, obstructive and regurgitant murmurs. Prof. Frerichs considers this case as an example of the

failure of the salicylate treatment of rheumatism, but says, as he knows nothing better, he will give it a further trial.

I have quoted this case for the express purpose of criticising the manner in which this eminent professor used and claims to have tested the efficacy of the drug under consideration.

As the reader will see, the medicine did at first all that its advocates claim for it. At the end of two days the patient was in every way better, and seemed on the high road to recovery, but on the third day the drug was discontinued, and, as Prof. Sée would have expected, a relapse followed.

If the reader remembers my report of Prof. Sée's experiments with this agent in the disease under consideration, he will see that whenever the drug was entirely discontinued soon after an amelioration of the patient's condition, a relapse always followed. It was found that a short time after the drug was discontinued, all traces of its presence in the urine disappeared; hence the inference that it had been entirely eliminated from the system. The remedy, therefore, should not be discontinued until all danger of a relapse is past, a period not less than ten or twelve days.

Why the remedy did not produce so decided a change for the better after the patient grew worse on the 19th, can perhaps be explained by the sudden series of organic changes that occurred at this time in the heart and pleura.

W. S. CALDWELL.

BERLIN, Feb. 1st, 1879.

DR. A. REEVES JACKSON, the founder of the Woman's Hospital of the State of Illinois, and its surgeon-in-chief during the past eight years, has resigned his position in that institution. His example was followed by the entire surgical staff. Cause—the interference with the work of the medical board on the part of some of the board of lady managers.

The daily papers of this city have since announced that a new surgical staff has been secured for this hospital, consisting of Drs. Byford, Roler, Nelson, Merriman, Sawyer and Flood.

Domestic Correspondence.

ARTICLE XIV.

NEW YORK LETTER.

NEW YORK CITY, Feb. 10, 1879.

GENTLEMEN: The over-crowded condition of New York has long caused it to have the highest death-rate of any American city, although the Board of Health is a very efficient one, and since its establishment has diminished the mortality considerably. This winter, however, it is likely to be larger than usual, owing to the great prevalence of scarlet fever. There have been and are now between two and three hundred cases every week, while the number last year was only about eighty. The cases have often been of a very malignant type, and in some weeks more than fifty per cent. have died. It is impossible to say what has brought on the epidemic. The public schools have disseminated it but slightly, although many of the buildings are ill-ventilated and unhealthy. A health officer visits each one every morning, reads off the localities where there are scarlet-fever cases, and if any of the children live in that locality they are excluded from school.

Diphtheria in this city, as in others, follows a regular line of increase or decrease. The number of cases here slowly increased until 1873, when it reached its maximum; since then it has been steadily diminishing. There are perhaps ten cases a week less this year than there were last.

The medical schools have been very flourishing. There are now probably over fifteen hundred medical students in the city—a number larger than in all England a year ago. Of the three

large colleges, the University Medical College and the College of Physicians and Surgeons have had a considerable increase in students, while there has been a slight decrease at Bellevue Hospital Medical College. Each one of these institutions has its particular advantages, and it is not a matter of great importance which is chosen by the aspirant for a degree. The College of Physicians and Surgeons is the most "aristocratic" and has a better educated and better appearing class of students. Its strong point is its gynæcology, although in chemistry, surgery and pathology it also has perhaps the best men. The University gives the student more for his money, and boasts of its Loomis, who is the best teacher of medicine in the city. Bellevue makes much capital out of its name, and shrewdly words its announcements so that one might think it had a monopoly of Bellevue Hospital. It does get its students into that institution rather more than the other colleges, but it has no more claim upon it than they and but few more clinics there.

There are two female medical colleges in the city which have been vainly struggling for a respectable position. They continue to be feeble, partly because there are two and their forces are divided, partly because there isn't a supply of medical students. After examining a catalogue of one of these colleges, nothing can seem more ridiculous than an outcry against the intolerance and narrow-mindedness which excludes women from a medical education. There are in the catalogue the names of over thirty instructors, most of them well-known and eminent in their profession. And there are, on the other hand, some half-dozen grim girl graduates. Two professors to each pupil! Truly this is not oppression. It seems rather like meeting with magnificent liberality the Galenic aspirations of the female mind. The students are admitted to the hospital clinics, and eight or ten, it must be confessed rather scraggy-looking young women, may generally be seen upon the benches.

The hospitals and medical education here are almost entirely in the hands of the Regulars. There is one city hospital under homœopathic control, which treats chronic cases and the refuse of other hospitals. Amongst practitioners there are a number of wealthy and fashionable homœopaths—who have dropped most of

their homœopathy—and who minister to the therapeutical idiosyncrasies of the ladies.

But New York's pet institution is its Woman's Hospital. Ten years ago the fashionable thing was obstetrics and Fordyce Barker; now it is gynæcology and T. Gaillard Thomas. The Woman's Hospital, as its annual report proudly asserts, is the only institution of its kind in the country, being devoted entirely to gynæcology. It is supported by endowments and subscriptions. The sum of $1,000 entitles one to have his or her name engraved upon a marble slab, which already proclaims the *aeternum decus* of dozens of philanthropists in the halls of the hospital building. The supporters and subscribers are amongst the *élite* of the city, and aristocracy turns its eleemosynary attention to leucorrhœal disturbances with a charming enthusiasm.

The hospital consists now of two separate four-story buildings, with a cottage for ovariotomies. Each building accommodates fifty or sixty patients. There are some free beds, but most of the patients pay from $4 to $15 per week. There are three wards in each building, one on each floor, besides private rooms. These wards are neat and comfortable, but without any elaborate decorations or appliances. Each bed is surrounded by curtains, a convenient arrangement on account of the necessity for frequent examinations. The hospital is a much-governed and much-visited institution. It has a board of governors, a board of lady supervisors, and a medical board and staff, the latter amounting in all to twenty-five for the hundred patients in the buildings. There is, however, an out-patient department which engages some of the medical officers. The character of the hospital is essentially surgical, and very fine results have been obtained in some directions. Operations upon the cervix and perineum are very popular, and almost uniformly successful. During the twenty-five years of the hospital's existence, ending a year ago, fifty-two ovariotomies were performed, of which one-half died. The per cent. of recoveries has lately been immensely increased. Since last October there have been a great many operations, some fifteen or twenty, without a death, although some of the cases were very bad ones. This record was interrupted only a short time ago. A woman entered the hospital in a very weak condition,

with a large abdominal tumor. This tumor had a characteristic fluctuating feel, and seemed to be undoubtedly cystic. There was some doubt, however, as to whether it was ovarian or uterine. The woman failed to improve in her general condition, and operation was undertaken as a last resort. The usual short incision was made, and a tumor of immense size, but without adhesions discovered. A large trochar was pushed into it, but withdrew no fluid. The incision had therefore to be extended to the ensiform cartilage, in order to get out the tumor. The pedicle was short and thick, requiring the largest clamp to hold it. After clamping, the tumor was cut off, the stump ligatured and sewed into the abdominal wound, and the clamp removed. In the pedicle was an artery nearly as large as the femoral. The tumor itself proved to be a solid fibroid, probably uterine, and which had appeared at the very last moment, even to the experienced touch of Dr. Thomas, to be cystic. The woman failed to recover from the shock of the operation.

It is impossible not to admire the thoroughness with which every precaution is taken to secure the success of this climax of surgical art. There is a small, isolated wooden building erected especially for the operation and immediate after-treatment. At the time of operation the temperature is raised to that of the body. The antiseptic treatment was used, but has been generally abandoned as unnecessary or worse. There is a profusion of assistants, and of instruments for every possible emergency. With all these provisions, and with the high reputation which its recent great successes have gained, it is natural that ovarian tumors from the regions all around should gravitate toward the Woman's Hospital. The number of operations, as well as the per cent. of recoveries, is increasing every year, and at the present rate we can almost predict a time when the abdomen will be opened here with as little anxiety as an abscess.

ARTICLE XV.

CALL FOR A CONVENTION OF ALL AMERICAN MEDICAL COLLEGES, to be held in the City of Atlanta, Ga., beginning at 10 A. M., Friday, May 2d, 1879.

Editor Chicago Medical Journal Examiner.

DEAR SIR: At the meeting of the "American Medical College Association," held in Buffalo, N. Y., June, 1878, Prof. S. D. Gross, a delegate from Jefferson Medical College, of Philadelphia, offered the following preamble and resolutions:

"WHEREAS, It is eminently desirable that the medical schools of this country should adopt a uniform system of instruction of a grade fully in accord with the requirements of the age in other branches of study, and with the practice of the medical institutions of Europe; and,

"WHEREAS, All the efforts to bring about such a change on the part of the American Medical Association, of the Association of Medical Teachers assembled at Cincinnati in 1867, and at Washington in 1869, and of different State medical societies, have signally failed, and,

"WHEREAS, The present time seems to be peculiarly favorable for taking strong ground upon the subject, inasmuch as it is now attracting general attention throughout the United States; therefore,

"*Resolved*, That this Association respectfully and earnestly request that the regularly organized and accredited medical schools of the United States hold, at their earliest convenience, a meeting for the purpose of adopting some definite and final action upon a subject of such vital importance to the dignity, character and usefulness of the profession, and the welfare of the American people.

"*Resolved*, That in order to impart proper efficiency to this plan, each and every college be requested to send two delegates, consisting of one member of each Board of Trustees, and one

member of each Faculty, with full power to act for their respective institutions.

"*Resolved*, That the medical and secular press throughout the United States be respectfully requested to lend their aid in the dissemination and discussion of these preambles and resolutions, in order to place the whole matter of medical education prominently before the profession and the people.

"*Resolved*, That a copy of these preambles and resolutions, signed by the President and Secretary of this Association, be transmitted to the officers of every regularly constituted medical college in the United States, with a request to hold the contemplated meeting at Washington City, or at some other central point, on the first Wednesday in September next, or as soon thereafter as possible."

Prof. N. S. Davis seconded these preambles and resolutions, and heartily endorsed them.

Prof. T. G. Richardson moved that the time of the proposed meeting be fixed at the Friday preceding the meeting of the American Medical Association, and that the place be designated by the President of this Association. This amendment was adopted, and the preamble and resolutions as amended, were adopted.

In compliance with this action of the American Medical College Association, its acting President, Prof. N. S. Davis, of Chicago, has designated *Atlanta, Ga.*, as the *place* of the proposed convention, while the aforementioned action of the Association has fixed the *time* at 10 A. M. Friday, May 2d, 1879. It is earnestly hoped that delegates from all "regularly organized and accredited medical schools" in the United States, will promptly meet at the above designated time and place. That the action of the convention may be definite, it is desired that each college send two delegates, with full power to act for their respective institutions—one of these delegates to be selected from the Board of Trustees, and one from the Faculty.

In general terms, the *object* of the convention is to adopt some "uniform system of instruction more in harmony with the requirements of the age." Among the questions appropriate for discussion and decision may be memtioned, "Shall all the colleges

require attendance upon three regular courses of lectures during three separate years, ere admitting students to become candidates for the degree of M.D.?

Is any uniform system possible in this or other things? If so, to what extent is it possible or even desirable at the present time? Each doctor in the land doubtless has in mind an ideal medical college system. But this convention cannot act upon idealities; it can only act upon that which is practicable to all honest efficient medical schools.

It is hoped that the medical press and teaching fraternity will freely and exhaustively discuss the subject matter of this convention. The doing of this at once will enable it to enter upon its labors with a very complete knowledge of the facts in the case.

To avoid misconception, let it be distinctly noticed that, although this convention is called by the "American Medical College Association," it is entirely distinct from that body. When assembled, the convention will elect its own officers and adopt its own methods for transacting its business in pursuance with the object of the call.

Signed, NATHAN S. DAVIS, M. D.,
Acting President of the American Medical College Association.

LEARTUS CONNOR, M. D.,
Secretary, Detroit, Mich.

FEBRUARY 6TH, 1879.

P. S.—It is desired that those colleges which decide to attend the aforesaid convention by delegates, will send notice to that effect to the Secretary at any time previous to April 25th.

POWDER FOR USE IN NASAL CATARRH—Beverly Robinson:

Iodoform, porphyrized,	4
Camphor, powdered,	4
Gum arabic, powdered,	8

Mix. For use several times in the day.

Editorial.

ARTICLE XVI.

NEW MEDICAL JOURNALS.

New medical periodicals have been appearing so frequently that it had become a matter of little comment with us to find a new specimen copy upon our table every few months. Many of them lived but a short time; their ephemeral existence ceased before the ink which announced their appearance to the reader had fairly dried.

A study of the mortality statistics of American medical periodicals can easily detect the principal cause of the high death-rate among them. The *causa proxima*, of course, is want of patronage. The subscription list remains so small that the publisher is soon convinced, continuation of his medical journal is equivalent to sacrificing so many hundreds or thousands of dollars upon the altar of medical journalism. And as his charity does not reach this height of enthusiasm, the publication is suspended.

But from the scanty patronage of many periodicals it must by no means be inferred that American physicians lack the profoundest interest in the progress of that science to which they have devoted their life. This conclusion would be entirely fallacious. On the contrary, we believe reading of periodical medical literature is more universal with the profession of this country than with that of any other nation; we know to an American physician a medical journal is as necessary a companion as the daily newspaper to every American citizen.

The trouble is, too many medical papers are published, not to supply a real want, but for purposes altogether foreign to, and incompatible with the dignity of scientific journalism. But the

body medical is quick in discriminating between cheap, worthless publications and meritorious medical journals. It supports the latter and rejects the others.

New medical periodicals of lasting value will be brought out only when and where the increasing number of scientific workers develops a natural demand for new channels through which they can communicate to the profession the results of their investigations and observations. Such periodicals are always welcome and will not fail to receive the hearty support of the medical profession.

We have recently received a few new exchanges of this kind, which we wish to recommend very warmly to the attention of our readers. Their *raison d'être* is the growing scientific activity in the American medical profession; their *aim* is solely the advancement of medical science; their *standard* is of the highest order and equal to the best medical periodicals of Europe.

We will give our readers a brief description of these new journals:

1. INDEX MEDICUS, A MONTHLY CLASSIFIED RECORD OF THE CURRENT MEDICAL LITERATURE OF THE WORLD. This is the title of a new periodical, edited by Dr. John S. Billings, Surgeon U. S. Army, and Dr. Robert Fletcher, M. R. C. S., England. The January number is before us, and it surpasses the most sanguine expectations which could be excited by the pretentious promise held out in the prospectus that it should record the medical literature of the world. The list of medical periodicals alone which are received by the editors fills twenty-four quarto pages. The remaining forty-eight pages of the number contain a list of all books, pamphlets and original articles published during the last quarter of the past year. The subjects of this index are arranged under the following heads: Anatomy and Physiology, with five subdivisions; Medicine, with sixteen subdivisions; Therapeutics and Materia Medica, with four subdivisions; Surgery, with ten subdivisions; Gynæcology; Obstetrics; Diseases of Children; Ophthalmology; Otology and Diseases of the Nose and Throat; Diseases of the Teeth; State Medicine; Veterinary Medicine, Miscellaneous. It is scarcely necessary to demonstrate the immense value of such a work for any practitioner, teacher

and writer. In its pages he will find the titles of parallels for his own observations, accounts of new remedies, the latest methods of therapeutics and full information of what has been written by others on any subject he may wish to investigate.

It is a gigantic task, conceived and executed by that same energy of American enterprise which has built the Pacific Railroad, tunneled our lakes and realized in the telephone the most fanciful of dreams.

The INDEX is published by T. Leypoldt, 37 Park Row, New York; subscription three dollars per annum.

2 Another very important addition to American periodical medical literature is the AMERICAN JOURNAL OF OTOLOGY, edited by Clarence J. Blake in conjunction with other aural surgeons of national reputation. It is a quarterly journal of about eighty pages, intended as a medium for the publication of original communications on physiological acoustics and aural surgery, also to furnish carefully prepared reviews of books treating of subjects pertaining to acoustics and diseases of the ear, and to give a digest of the more important papers on aural surgery, published in other periodicals and in reports of medical societies.

The fact that the American text-books on diseases of the ear are acknowledged to be the best works of this kind in the English language; the recognition all the world over of the transactions of the American Otological Society as valuable scientific contributions; and the high standing of the editors of this journal, are a sufficient guaranty for its success, as a promoter and exponent of science. Whether it will be a success for the publishers depends solely upon the interest the American medical profession will show for it by a liberal patronage, which it justly deserves. It is published by William Wood & Co., 27 Great Jones street, N. Y. Price, three dollars per annum.

3. The ARCHIVES OF MEDICINE, edited by E. C. Seguin, M.D., in connection with other gentlemen of high standing, may well be mentioned side by side with its other two new American contemporaries. Its pages are open for scientific original communications and observations upon matters relating to medicine; some space also is allowed for book reviews and summary. The

first number is a fine specimen of medical Journalism, both as to the reading matter and to the press work.

The truly scientific spirit which pervades the pages of the *Archives* reminds us strongly of the *Archiv. der Heilkunde*, which, after 20 years of existence, had to be suspended for want of patronage. Let us hope this journal will meet with a better fate than its German namesake. It is to be a bi-monthly journal, published by G. P. Putnam's Sons, 182 Fifth avenue, N. Y. Subscription price, three dollars per year.

4. With the foregoing periodicals we wish to rank a publication which was started last year by the united efforts of a number of English and American scientists, and which deserves the support of all physicians whose interest is not limited to reading on strictly practical subjects. Physicians, then, who in their spare moments like to learn what is going on in the collateral sciences, will find enjoyment in reading the JOURNAL OF PHYSIOLOGY, edited by Michael Foster, M.D., in conjunction with others, and published in London and New York, 22 Bond Street, by Macmillan & Co. From four to six numbers will form a volume of about 500 pages. Subscription price, $5.25.

A CONFESSIONAL.—The *British Medical Journal* has established in its columns a confessional department, in which practitioners are invited to report failures, blunders and errors of all kinds.

The idea is such an excellent one that we hasten to profit by it. We invite all our readers who have to confess mistake, carelessness, ignorance or unavoidable failure, to contribute to such a department in this journal—and that whether they be repentant or unrepentant sinners. Such as may desire to append their names to their communications may do so, not for publication, but as a guarantee of good faith, the editors holding themselves strictly responsible for inviolable secrecy upon that point. Communications without names will be received and published if they bear internal evidence of truthfulness.

We are confident that a mistake, failure or blunder may thus be made to accomplish in the end a great deal of good.

Reviews and Book Notices.

ARTICLE XVII. — TRANSACTIONS OF STATE MEDICAL SOCIETIES.

1. *Transactions of the Thirty-third Annual Meeting of the Ohio State Medical Society, held at Columbus, May 14th, 15th and 16th*, 1878.

2. *Transactions of the Medical Society of the State of Pennsylvania, at its Twenty-eighth Annual Session, held at Pittsburgh, May*, 1878.

1. The transactions of the *Ohio State Medical Society* contain so much of interest that the society may justly feel proud of its achievements as reflected from the pages of this neat little volume.

The retiring president, W. H. Philips, undertook to show the shortcomings of the present practice in court, of taking the testimony of medical experts. "The parties are allowed to summon whom they please, to testify in their favor. Neither party summons a witness whose testimony he is not certain will aid his side in the case. The experts found in our courts are, therefore, men of pre-ascertained views, brought into court because they are advocates of some particular theory, which is needed to sustain the complaint or defense. Hence it is that in almost all our criminal trials experts are found swearing positively and directly contrary to one another. In the Stokes-Fisk case, for example, experts were equally divided in opinion as to whether the deceased died from the effects of the wound or the manner in which the ball was extracted." And to harmonize these opposing views of experts, and to inform the jury of the scientific principles which they shall recognize in making up their verdict, this duty rests

upon judges who, not being themselves medical experts, do not possess the knowledge necessary to determine real medical science from speculative theories. Medical experts should be medico-legal advisors to assist the court in forming a decision upon medical questions. But these advisors are hired in the interest of one party, and paid for their services by the interested party, consequently their testimony is not unbiased, and is always so contradictory that the legal profession looks with contempt upon medical witnesses. Judge Davis, of Maine, is quoted as having said: "If there is any kind of testimony that is not only of no value, but even worse than that, it is, in my opinion, that of medical experts."

Thus, the medical men have to bear the blunt of ridicule and contempt, which truly and justly belongs to the absurd, monstrous system in vogue in our courts. This needs a radical change, and to accomplish that with intelligence and success, we must study, as a model system, that of Germany. "In Germany alone has medical jurisprudence received a proper estimate of its worth. It was introduced into the German universities at their foundation, and made a part of medical education. The expert is made a government officer, holding his position because of his peculiar practice, skill, and fitness." * * * "Their appointment is continuous, and they owe it to neither party, but to the State. They make personal investigation of the facts in every case. Power is given them to take testimony. They may call experts as counsel if they wish, but these experts must have certificates, received from State examinations, of their skill in the specialty whose principles it is desired to apply. The facts and proofs, and the conclusions arrived at by the expert tribunal, are shaped into a written report, which is carefully preserved along with the report of the subsequent proceedings. So far as the court is concerned this report is conclusive." If the parties interested be dissatisfied with the conclusions of this expert tribunal, they may appeal to a second medical commission, and from its decision an appeal may be taken to the Supreme Medical Commission, comprising men of national reputation. The German government "recognizes the fact that experts stand to the court in the relation of assistants. It, therefore, denies to those who are interested the

choice of these assistants. The educational requirement renders the expert competent. His appointment by the State ought to render him impartial." The adoption of a similar plan is strongly advocated by Dr. Philips in the remodeling of the present method of precedure.

Dr. J. W. Hamilton gives us a very interesting report of cases of "Maxillary and Naso-pharyngeal Tumors."

Dr. C. S. Muscroft speaks very highly of sub-sulphate of iron as a local remedy for erysipelas, acute and chronic ulcers of the lower extremities, also "for injections in puerperal fever, attended with vitiated discharges from the uterus and vagina;" and, "in ulcerations of mucous linings of the nose, attended with fetid discharges."

Dr. Thad. A. Reamy illustrates by way of clinical reports the use of the curette in certain forms of uterine diseases. His experience with the instrument has been "extensive and eminently satisfactory as to safety and efficiency."

Dr. R. L. Sweney reports a case of an inverted uterus reverted seven months after its inversion.

Dr. C. H. Read has, for the past seven years, tested the efficiency of quinine as a prophylactic in scarlet fever, "but kept a full record only of twenty-nine cases of exposure." "Of these, twenty took quinine as a prophylactic. Of these twenty, nineteen, or ninety-five per cent., escaped. Of the nine who took no quinine, none escaped."

The report on the progress of ophthalmology during the year 1877, by Dr. D. B. Smith, may be recommended as a model to the attention of all committees of medical societies charged with the duty of making an annual report on the progress in the various branches of medical science.

2. It is a pity that the *Pennsylvania State Medical Society* does not appreciate the advantages of solid book-binding. Its transactions deserve a better fate than to be sent out with a simple paper cover and with the leaves stitched so loosely that after a short use they are out. Volumes of 500 large octavo pages have outgrown that embryonic stage of a book, called *brochure*, and, therefore, should not be dressed as a baby but treated as a full-grown adult.

The present volume contains addresses by eminent men, which deserve more than passing attention.

President D. Hayes Agnew selected for his address the very suggestive theme of "Errors of Diagnosis." Relating some famous cases of this kind, he endeavored to show that in the most of these cases errors of diagnosis could have been avoided, and their occurrence was due to superficiality in examination on the part of the surgeon. "Surgeons of large experience, by their great familiarity with disease, are often governed more by their intuitions in deciding upon the nature of a case, than by the tedious and cautious plan of analysis practiced in the earlier years of their career." "Such knowledge tends to engender a spirit of over self-confidence which may lead to fatal errors."

A large number of errors of diagnosis may be placed to the account of ignorance. To this source must be traced instances of undetected luxations of the humerus, cases in which hernia, varicocele, and hydrocele are confounded with one another, and similar blunders.

Errors of diagnosis not unfrequently originate perplexing litigations which might often be obviated if medical men were less officious and more reserved in expressing an opinion upon the skill of a professional brother. Every physician must blush over this statement of Dr. Agnew: "In almost every suit for malpractice with which I am acquainted, singular as it may appear, there has been a doctor at the root of it." This could not be the case if every physician adopted the policy advocated by the essayist. "I do not wish to be understood as advocating a policy which would shield any member of our profession from the just consequences of ignorance, recklessness, or neglect; but do say that any medical man who ventures to assail the professional skill, or to lessen the confidence of the public in a brothor practitioner, without being conversant with all the facts in dispute and having the most conclusive evidence of the correctness of his own diagnosis, deserves, in the highest degree, public censure, and should be ostracized by the entire body of medical men."

Dr. W. Goodell delivered a very interesting lecture on "Laceration of the Cervix Uteri," giving a graphic description of the local and constitutional disturbances this lesion may pro-

duce. It is an important factor in the production of uterine disorders and a common cause of sterility. The treatment, medicinal and operative, of fresh and old lacerations is dwelled upon very extensively, and his own mode of performing the operation fully described. Those interested in the subject will read this address with pleasure and profit.

Dr. Samuel W. Gross favored the society with an address in surgery, selecting for a topic, "The Rational Treatment of Stricture of the Urethra." The substance of his lecture is incorporated in the following axioms:

1. The rational treatment of stricture of the urethra consists in restoring the natural expansibility, or caliber, of the affected portion of the canal.

2. Before any operation, having this end in view, is practiced, the sensibility of the urethra should be obtunded, lest it resent the violence to which it is about to be subjected.

3. After the spasm and hyperæsthesia have been relieved, the caliber of that portion of the urethra in which the stricture is located, should be estimated by the urethrometer, with the view of bringing the affected portion to that standard.

4. Internal urethrotomy from behind forwards is the most effectual mode of accomplishing that object.

5. The meatus should not be interfered with, provided its circumference is eight millimeters less than than of the spongy urethra.

Dr. S. D. Risley gave a clinical analysis of one hundred and fifty-three cases of iritis. He found iritis had furnished four per cent. of all the cases of eye diseases coming under his care. Only fifteen cases were seen during the first week of the disease, in a very large number the true nature of the disease had not been recognized.

Syphilis stood out prominently as an efficient cause of iritis; *sixty* cases of the 153 were plainly due to this cause, and were for the most part associated with the secondary symptoms of the disease. *Four* cases were undoubtedly rheumatic, and *twelve* traumatic. In the remaining cases no cause was stated in the record. The *serous iritis* occurred in but four cases; all other cases showing the *parenchymatous* or *plastic* form of iritis.

Beside the use of atropine, local depletion and opiates ("Dover's powder in full doses, or morphia hypodermically"), mercury was freely employed. And it is worth recording, the opinion of Dr. R., founded upon the careful study of so large a number of cases: "I have repeatedly, for many days, used strong solutions of atropia in the most persistent and vigorous manner, assisted by the local abstraction of blood, with no effect upon the synechiæ, other than slightly stretching them; but no sooner were the gums spongy and a slight mercurial fetor of the breath, than the adhesions lost their tenacity, either melting down and disappearing as by magic, or becoming friable, lost their hold upon the capsule, and the pupil being free, expanded widely under the action of atropia."

"This beneficial action of mercury in iritis is by no means confined to cases of syphilitic iritis. In any case of acute iritis, with marked tendency to plastic exudation, the surgeon does not do his whole duty who fails to use mercury to the first manifestation of its systemic effects, except, possibly, in the comparatively rare cases where such an acute attack is obviously due to a gouty or rheumatic diathesis."

"The method of administration has many times seemed a matter of importance. Inunctions have certainly, in my experience, proved of greater value than the administration by the mouth in any form."

There are a number of other excellent papers in this volume, which contain many practical suggestions. Dr. William Pepper contributed a "Clinical study of Catarrhal Inflammation of the Bile-ducts, with Remarks on the Use of Nitrate of Silver in its Treatment." Dr. Lawrence Turnbull reported "Three Cases of Disease of the Mastoid Process," to show the difference in the clinical pictures of: (*a*), Inflammation of the external periosteum; (*b*), Acute inflammation of the mucous membrane, followed by accumulation of pus in the mastoid cells; (*c*), Chronic sub-acute inflammation of the mucous membrane, with sclerosis. The same author read a paper on his "Experiments and Observations on the Physiological Properties of Hydrobromic Ether."

Dr. E. Dyer contributed two short papers "On Sympathetic Ophthalmia," and "On the Metric System in Medicine."

"Anæsthesia in Parturition," by A. H. Halberstadt; "Rosacea," by John V. Shoemaker; "Psoas Abscess Simulating Nervous Affections," by Chas. K. Mills; "Some Remarks upon the Descent of the Testes, and the Formationof Oblique inguinal Hernia and Hydrocele," by O. H. Allis, conclude the series of original communications; they, with reports of committees, fill the first two hundred and fifty pages of the volume; the second half is given to the reports of the county medical societies. F. C. H.

ARTICLE XVIII.—DETERIORATION AND RACE EDUCATION. By Samuel Royce. Boston: Lee & Shepard, Publishers, 1878.

More than once, since opening the covers of this volume, we have been disposed to return it, as irrelevant to the subjects which come legitimately within the scope of a medical reviewer. There are, however, certain points of contact between the book and a class of subjects with which the physician is continually made familiar, which will justify a criticism of a portion, at least, of its contents.

The work appears to be the outcome of the researches and speculations of a professional philanthropist. Like the majority of kind hearted people, blessed with a scanty knowledge of men and things, emerging for the first time from the happy seclusion in which they have been cradled, he looks about him in the whirling throng of human creatures, and remarks with sympathetic pain the wretchedness which overwhelms so many of his fellow beings. The farther he looks, the more suffering he beholds. It certainly was not so during his childhood in the little nook among the hills where he was born; consequently the race has fallen upon evil days, and the times must be growing worse. He begins to read, and his discoveries appal him. Everywhere he finds for each year a higher figure for every form of crime, disease and death. In every State of the Union new prisons and new asylums are springing out of the ground, and yet the number of unhoused lunatics and paupers is continually growing. It must be so! Statistics prove it! Criminals are more numerous! Hospitals are more and more crowded! The insane are increasing! Poverty is rising like a flood! There are the figures, and they can not lie! Such is the course of reasoning by

which this author demonstrates the deterioration of the race. He has raked together an immense amount of statistical information of this kind; but so thoroughly is it dissociated from qualifying facts, that it is utterly useless and misleading in its character, for he makes no reference to the fact that the population has greatly increased between the years under comparison, and that improved methods of collecting statistics have swelled all later returns out of due proportion with the earlier tables. It is an error precisely similar to the blunder which one would commit were he to contrast the number of insane persons in the Cook County Asylum, fifteen years ago, with the number now cared for in that institution. Fifteen years ago there were not more than a dozen lunatics in the almshouse at Jefferson. The population from which they came was about one hundred and fifty thousand souls. That population has now increased four-fold, but the lunatics in that almshouse to-day, since the erection of the new building, number more than four hundred persons. In view of this fact, if we allowed ourselves to employ the logic of this book, we might justly infer that Cook county will soon be inhabited by insane people alone.

The fact is, that statistics are not to be trusted, for the information which will enable any one to decide whether the race as a whole is deteriorating. It is easy enough to trace the course of a family, or a tribe. The stalwart pioneers who have expended all their energies in grubbing stumps and fighting Indians in a malarious climate, are very likely to be succeeded by a puny offspring. Hardy laborers, transplanted from the hay field into the steaming atmosphere of a cotton mill, usually die young, and are followed by a scrofulous line of descendants. Ancestral piety avails little as a protection against the seductions of newly gotten wealth. But these are accidental and individual phenomena. If we would learn the truth of the matter, we must study the history of the world, and must compare the centuries with each other. Such investigation gives results very different from the conclusions of our author. Perhaps this may be one reason why he manifests such a contempt for those classical studies which make us acquainted with the ages that have passed, and are unknown to the majority of mankind.

This error of hasty generalization is the fault which vitiates all the conclusions of this book. It contains a vast heap of unverified assertions, with very little regard for logical sequence. The race, says the author, is growing continually worse, as a consequence of wrong methods of education and occupation for the masses. Our schools are devoted to training the young in a body of useless knowledge, such as history, reading, mathematics, languages, music, etc.; consequently, when young people leave school they are unfitted to earn their own living, and are never willing to do any useful work, preferring rather to "live by their wits." Our present school system should therefore be destroyed, and in its place should be provided kindergarten schools for small children, and manual labor schools for those of larger growth, in which young people should be taught the trades and the principles of agriculture. When the pupils have graduated from these places of learning, they will be so well skilled in all mechanical and agricultural arts, that of course they will always find abundant occupation and high wages. But since many of the trades are notoriously unhealthy, capitalists must be compelled to make them healthy. And since it has never been found possible to house the working people in factory towns without a great amount of over-crowding and misery, these operatives must all be furnished with houses in the country, where they can all have their gardens, and their pigs and poultry. But since the railway service necessary to carry laborers from the city factories to their rural homes is expensive, the railway owners must be compelled by law to carry such passengers for a nominal sum, or else the factories must all be moved out of town into the healthful country air. Inasmuch as these great improvements will not be undertaken by ordinary "bloated bond holders," laws must be made, compelling them to conduct their business on philanthropic principles, and we must have an army of inspectors and other officials, to carry out these beneficent laws.

Such, in short, is the argument of this book. It is the same line of reasoning with which one becomes so familiar in the volumes which record the proceedings of our Social Science Congress, Public Health Associations, Board of Health meetings,

and Philanthropical gatherings generally. It is the argument which is exceedingly popular with all benevolent people who feel acutely over sufferings which they witness, but who have not the knowledge with which to discover the true causes of such misery, nor the patience and energy requisite to undertake the measures necessary for their effectual relief. Something short, sharp and decisive is what they desire. *Stamping out* is their favorite phrase, and they care little how much evil may be done, if they are persuaded that good will come of it.

In all this, however, the benevolence which animates these people is beyond praise. The thing to regret is the misdirection of their energies. The improvement of the condition of the human species is their object, and it is the most laudable object in the world. But they mistake the way to the accomplishment of their desires, when they think to ameliorate the condition of mankind through the strong arm of civil government. The effort to secure such a result by the interposition of civic power has been tried again and again, and it has always failed. The real progress and improvement of the race has always been effected by other agencies, which have usually been compelled to array themselves in active opposition to existing governments. The entire history of the growth of liberty—which is the greatest blessing a human being can enjoy—is the record of a continual warfare against constituted governments. We in this country have secured the largest amount of liberty ever possessed for any length of time by any people, but we are by no means thoroughly emancipated yet. There is a constant effort on the part of the office-holding and office-seeking classes to increase their own profits and power at the expense of citizens. There is a constant tendency on the part of these classes to extend the functions of government to affairs with which it has no rightful relation in a free society. Such being the fact, it is a reason for regret when we discover the philanthropical portion of the community unwittingly seeking to aid the official classes in their insidious attacks upon the liberty of society.

Did time and space permit, it would be profitable to show the evils which always result from governmental interference with affairs outside of its legitimate province. Good government is

that which busies itself solely with the protection of the rights of its subjects—which secures for each individual the largest amount of liberty consistent with the liberty of his fellows. Just as soon as government undertakes other functions, its weight begins to bear oppressively upon individuals and classes in society. As soon as it becomes apparent that the strong arm of the State can be secured for the advantage or disadvantage of favored or disfavored individuals, a struggle begins to obtain in the direction of that power for private ends. The highest success in this effort produces a despotism—a monster from which we all recoil—but the community is full of people who are anxious to get acts of despotic departure from good government performed for their individual welfare. Every such act is not only an injury to the community and to the individual who fancies himself thus benefited, but it also works out its own final failure to accomplish the end desired. To make this clear, let us review a few out of the innumerable examples which might be adduced in proof of this proposition. English merchants during the last century thought it would be greatly to their advantage to have the trade and manufactures of America regulated by act of Parliament for their own benefit. The result was a bloody war, an addition of one hundred million pounds to the national debt of England, and the loss of the finest colonies ever possessed by the crown. Governmental interference with the natural laws of commerce was not beneficial in that case to the traders who were so clamorous for law in their own behalf.

Scarlet fever is a dangerous disease, of a rather communicable character. Not long ago there was a tremendous outcry for governmental interference to *stamp out* the disease. The result of a great deal of activity on the part of the official guardians of the public health, was, according to the published statistics, to raise the mortality of scarlet fever, in this city, from about ten per cent. to nearly thirty per cent. of the cases. This was the ostensible result. The real result was to produce an extensive concealment of the disease, for fear of the obnoxious and useless measures which are employed in the name of the law of the land. Now, when one reflects upon the fact that a case of concealed disease of this character is more dangerous to a community than

a case which is openly confessed, it is easy to see how much benefit we derive from such official interference. Syphilis is another terrible scourge of the human race. There are plenty of people —doctors too—who are crying out for a governmental inspection and purification of prostitutes, in order to restrict the prevalence of venereal diseases. Such people are very fond of quoting the results of such measures in the army and the navy, and have much to say about the vast diminution of suffering among the poor girls who are subjected to the periodical visits of the governmental inspectors. They are not in the least chary of their sneers at the "uncognid," as they call those who presume to question the wisdom of the measures which they propose, and are evidently quite unconscious of the fact that they are all the time writing themselves down in the catalogue of *ignorant sentimentalists: ignorant* because unacquainted with the natural laws which control such things, and *sentimentalists* because they allow their sympathy with the suffering of a certain worthless minority to close their eyes to the highest interests of the vast majority of mankind. This is not the place for a full discussion of the regulation of prostitution. It is sufficient for us to remind the reader that it has been again and again proved by the highest authority in such questions, that the hopes of prevention of syphilis by official regulation are fallacious; and that, even if the results of military experience in barracks, where soldiers are made to eat, drink, and copulate to the sound of drum and fife under the ever present eye of an officer, could be secured in the private life of every citizen, the consequent debasement of public morals would be sufficient to condemn the whole thing.

Again, if we consider the results of the administration of charity by the Government, we find that the intrusion of the civil power has been only disastrous in this field of effort. Consider the waste and the corruption which characterizes every branch of public charity administered by the government. Consider the complaints of the tax-payers who give to the poor through the official channels because they *must*, and not because they desire the relief of misery. Consider, also, the wide separation between rich and poor, which is thus intensified, for when the wealthy merchant has paid his tax for pauper relief, he will not listen to

the story of distress which is related at his door. We shut up our hearts and our purses when our taxes have been paid; consequently, we lose all the humanizing influences which flow from the judicious exercise of individual charity. Consider our public asylums and hospitals—how much more they cost than similar institutions supported by private benefaction—how difficult it is to secure in them the services of *good men*, while a private charity can secure in its management and service the best talent of the country. It is not too much to assert that our whole system of public charity, based upon governmental supervision, is productive of as much injury as good. It is the outcome of the impatience of people, who cannot wait for the slow operation of natural law, but must force an unhealthy and precocious growth by the aid of government. That the results of such methods should be fraught with evil is only what might be expected when we consider the source of governmental power. All civic governments reflect the masses of the population over which they are placed. The intellectual and moral level of the masses in even the most enlightened nation is very low, consequently the government which represents such masses cannot exhibit any very exalted tendences. It does not, therefore, furnish the right kind of motive power for the advancement of projects which look to the elevation and improvement of the race. Nature has provided a sufficient motive power in the moral and intellectual sense of the race; and it is to this that philanthropists must be content to appeal, if they desire a real and lasting success.

We have numerous societies for the benefit of people. One more organization is imperatively required—a society for the enlightenment and restraint of philanthropy. H. M. L.

BOOKS AND PAMPHLETS RECEIVED.

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A Practical Manual of the Diseases of Children, with a Formulary. By E. Ellis, M. D. Third Edition. Cloth, pp. 213. Wm. Wood & Co., New York. 1879.

A New Treatise on Assimilation and Digestion. By John Wesley Evans. Cloth, pp. 112. Quincy, Ill. 1878.

Diphtheria—Its Nature, Causes, Prevention and Treatment. By J. H. Kellog, M. D. Cloth, pp. 64. Good Health Publishing Co.

Sixth Annual Report of the Secretary of the State Board of Health of the State of Michigan for the fiscal year ending Sept. 30, 1878. Cloth, pp. 355.

Elements of Comparative Anatomy, by Carl Gegenbaur. Translated by F. Jeffrey Bell, B. A. The Translation revised by E. Ray Lankester, M. A. Cloth, pp. 645. London: Macmillan & Co. 1878.

An Introduction to Pathology and Morbid Anatomy. By T. H. Green, M. D. London. Third American Edition, from fourth revised and enlarged English edition. 132 Illustrations. Cloth, pp. 323. Philadelphia: Lindsay & Blakiston. 1878.

Habitual Drunkenness and Insane Drunkards. By J. B. Bucknill M. D. London. Cloth, pp. 103. London: Macmillan & Co. 1879.

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Transactions of the American Ophthalmological Society.

Transactions of the Wisconsin State Medical Society. 1878.

Second Annual Report of the State Board of Health of Colorado. 1877.

On Loss of Weight, Blood-Spitting and Lung Diseases. By Horace Dobell M. D. Cloth, pp. 274. Philadelphia: Lindsay & Blakiston. 1878.

On the Surgery of the Face. By Francis Mason, F. R. C. S. One hundred illustrations. Cloth, pp. 170. 1878. Philadelphia: Lindsay & Blakiston.

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Naval Hygiene, Human Health and the Means of Preventing Disease, with illustrative incidents principally derived from naval experience. By Jos. Wilson, M.D., Medical Director of U. S. Navy. Second Edition. Cloth. pp. 274. 1879. Philadelphia: Lindsay & Blakiston.

A Contribution to the Medical Treatment of Chronic Trigeminal Neuralgia By E. C. Seguin, M.D. Reprint from *Medical Record*, Jan. 4, 1879.

Clinical Lecture on Syphilitic Brain Lesions. Reprint from *New York Medical Journal* September, 1878. By E. C. Seguin, M.D.

First Annual Report of the Presbyterian Eye and Ear Charity Hospital, Baltimore. 1878.

Case of Ovariotomy. By Ed. Bork, M.D. (Successful.) Reprint from *St. Louis Medical and Surgical Journal*, April, 1878.

Case of Ovariotomy. By Ed. Bork, M.D. (Unsuccessful.) Reprint from *St. Louis Medical and Surgical Journal.*

Transactions of the Detroit Medical and Library Association, January, 1879.

Report and Resolutions Relating to Sanitary Legislation, Presented to the American Public Health Association at its meeting in Richmond, Va. Nov. 1878,

The Sanitary Protection Association of Newport, R. I.

Placenta Prævia. By G. M. B. Maughs, M.D. Read before the St. Louis Obstetrical and Gynæcological Society, Sept. 19, 1878.

Journal of the Iowa and Illinois Central District Medical Association, Oct. 10, 1878. Rock Island.

Removal of Morbid Growths from the Uterus. By W. S. Ross, Evansville. Ind. Reprint from the *St. Louis Medical and Surgical Journal.*

One Hundred and Sixty-three Cases of Fracture of Neck of Femur, Collected and Reported by H. Wardner, M.D., Cairo, Ill. Reprint from CHICAGO MEDICAL JOURNAL AND EXAMINER, January, 1879.

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On Fracture of the Femur. By Ed. Bork, M.D., with Illustrations.

Eighteenth Annual Report of the Alabama Insane Hospital at Tuscaloosa, October, 1878.

Conclusion of the Board of Experts authorized by Congress to Investigate the Yellow Fever Epidemic of 1878.

New and Original Theories of the Great Physical Forces. By H. R. Rogers, M.D.

Eight Cases of Intra-laryngeal Tumors Removed through the Natural Passages. By J. H. Hartman, M.D., Baltimore.

Aphasia, or Aphasic Insanity, Which? A Medico-legal Inquiry. By D. C. H. Hughes, St. Louis, Mo. Reprint from *American Journal of Insanity* Jan. 1879.

On Gastro-Elytrotomy. By H. J. Garrigues, M.D., with three wood cuts. Reprint from *New York Medical Journal*, November, 1878.

Address of W. O. Daniell, M.D., President of the Medical Association of Georgia, Delivered at Twenty-ninth Annual Meeting. Reprint from Transactions of Medical Association of Georgia, 1878.

Mansil's Almanac of Planetary Meteorology and New System of Sciences, 1879.

Summary.

Collaborators:

DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY, DR. D. R. BROWER.

PRACTICAL MEDICINE.

TURPENTINE IN WHOOPING COUGH. (*Wiener Allegem. Med. Zeit.*, No. 12, 1878.)

Dr. Gerth cured a case of laryngeal catarrh by placing twenty drops of turpentine on a handkerchief, held before the face and causing about forty deep inspirations to be taken. Repeating this thrice daily, the cure was quite rapid. In the same family he found an infant fifteen months old in the convulsive stage of whooping cough, quite exhausted, and vomiting all ingesta. There was at the same time slight bronchial catarrh with slight evening rise of temperature. Gerth decided to experiment here also with turpentine. He directed the mother to hold the moistened cloth as above, before it when awake, and to drop the oil upon its pillow when asleep. The result was most happy. Within the twenty-four hours the frequency and severity of the attacks notably diminished. The child's strength was sustained by stimulants, and improvement was very rapid. Within a year pertussis became epidemic in his vicinity, and he repeatedly tested the drug in this way. He gave it to children of all ages, and in any stage of fever. The initial catarrh, the convulsive, and the final catarrhal stages were all decidedly benefited, the spasmodic attacks being in many cases aborted.

SURGERY.

VOLKMANN AND KRASKE. Report of the surgical clinic at Halle. Sixth annual meeting of the German Society of Surgery. (*Contralbl. f. Ch.* No. 50, 1878.)

The report contains only the larger amputations (including those of the breast), resections, operations for hydrocele, complicated fractures, and penetrating wounds of joints. (It must be remarked, that at no other clinic are the antiseptic principles more strictly obeyed than at Halle.)

There were, altogether, 183 exarticulations and amputations performed on 172 patients (*not* counting amputations of fingers, toes, and partial amputations of the hand).

Of these, 139 cases were uncomplicated, with a mortality of 2.87 per cent. (4 cases). One case of traumatic exarticulation of the humerus, and one of the thigh (also traumatic), died four hours after the operation. An amputation of the leg was followed by death from habitual erysipelas, while only one case of amputation of the thigh (out of 42) in which the injury extended beyond the nates, died after twenty-four hours.

Among the complicated cases there were:

(1.) Nine double amputations, with two cases of death from shock (amputation of the thighs).

(2.) Six amputations, complicated with severe multiple injuries, all fatal.

(3.) Fifteen amputations, performed on patients suffering from septicæmia or pyæmia, before entering the hospital; of these 8 died (52.3 per cent.)

(4.) Three patients, who died from intercurrent diseases, not depending on the surgical affection, viz: One delirium tremens, 1 genuine pneumonia, 1 case of abortion, followed by puerperal fever.

Therefore, of 172 patients, with 183 amputations, there died 23 cases (with 27 amputations), while 149 (with 156 amputations) recovered.

Ninety-one uncomplicated resections of large joints (48 hip-joints) were performed, with a mortality of 5 cases. Two children of three-fourths and 2½ years, died in collapse; 1 patient

succumbed to thrombosis of both crural veins, another to hæmorrhage from involvement of the crural artery in a lymph-gland abscess. One child died of basilar meningitis three weeks after the operation.

Four re-sections, complicated by previously existing hernia, proved fatal. In 2 other cases fatal complications existed in the shape of acute phthisis and of delirium tremens.

No cases were lost among 10 re-sections in the continuity of the bone. Among 50 osteotomies (necrosis operation) 1 case of hæmorrhage in hæmophilia represented the total mortality.

One hundred and nineteen amputations of the mammary gland were performed on 110 patients; the contents of the entire axilliary cavity were included in the operation seventy-five times. Six patients died, viz.: two of erysipelas, one in collapse a few hours after the operation, one from malignant pustule (infected with catgut), and two of marasmus from chronic suppuration.

Forty-five cases of hydrocele were treated by incision without any mortality. No deaths occurred, likewise, amongst *seventy-three cases of complicated fracture and twenty-four instances of penetrating wounds of joints.*

Pyæmia did not occur in a single case, septicæmia only in three cases of gangrene of the leg after ligation of the crural artery. Chronic septicæmia was observed very rarely; tetanus and erysipelas were each observed four times.

(Hitherto the partisans of Lister have referred to the success and shortened duration of single cases rather than to statistics, in order to prove the efficacy of the antiseptic method. With such statistics, however, as those of Volkmann, they can enter boldly into the ranks.)

OBSTETRICS.

THE UTERO-OVARIAN AMPUTATION AS COMPLEMENTARY TO THE CÆSARIAN OPERATION. H. Debauge. (*Lyon Médical*, Jan. 5, 1878.)

The utero-ovarian amputation in a woman subjected to Cæsarean section, was first practiced at Pavia, May 21, 1875, by Prof.

Porro. In this case it was an operation of necessity, being the only means capable of arresting a hemorrhage which threatened to be speedily fatal. The circumstances surrounding the patient were as unfavorable as possible; an epidemic of puerperal fever raged in the wards of the maternity, at Pavia; and yet, the experiment of Porro was crowned with complete success. At the end of six weeks his patient left the hospital, and was able to bear the fatigue of a journey of several hours.

Since this epoch, the example of Porro has had imitators. To-day his operation has become the complement of Cæsarean section in Italy, Belgium, Germany and Austria. The accoucheurs of France still hesitate to perform it.

Some months since, one of our young confreres, Dr. Imbert de la Touche, had the happy idea of making the new operation the subject of his inaugural thesis. His remarkable work is before us; and we think we may render good service in seeking to popularize a method calculated to lessen the mortality in an operation justly regarded as one of the most deplorable resources of surgery.

The Cæsarean operation, as Dr. Imbert remarks, has been performed forty times in Paris, and among these forty operations there has not been a single successful one. More fortunate, the surgeons of *la Charité*, of Lyons, in a series of twenty-five operations made between 1841 and 1878, have had one cure, belonging to Prof. Bouchacourt. A single success opposed to so many deaths, is indeed a sad result; and there is not another operation in surgery which gives similar statistics.

Among the causes which may be invoked to explain such a frightful mortality, there are three which deserve to be mentioned, because they are annulled by the method of surgeons of Pavia. First, the hemorrhage which follows the operation, a hemorrhage which comes either from the edges of the uterine wound, or from the placental site, and which too often resists all the resources of the operator. Second, the effusion into the peritoneal cavity, of blood, amniotic fluid, and the lochia, an effusion which the utmost precaution cannot prevent. Third, the inflammation which has its origin in the uterus, and from there extends throughout the peritoneum.

To obviate these three causes of death, there is but one resource, the one to which the surgeon of Pavia resorted; the excision of the uterus immediately after the extraction of the child. The necessity of removing with the uterus the entire system of utero-ovarian vessels, and the utility of protecting the patient from the periodic fluxions which the presence of the ovaries entails, led Porro to perform at the same time with the amputation of the uterus that of the ovaries and broad ligaments.

He was encouraged to enter this path by the results following ovariotomy and hysterotomy in affections of the ovary and uterus. The statistics of Péan, of Koeberlé, of Marion Sims, demonstrated to him that the peritoneum can support great injuries better than formerly supposed, and that by making some changes in the process followed in Cæsarean section, it might be possible to make of it something besides a nearly always fatal operation.

The beginning of the operation resembles that of ordinary Cæsarean section, up to the moment when, the uterus being widely open, the surgeon can proceed to the extraction of the child. This done, instead of separating the placenta immediately, the uterus is drawn out through the abominal wound, and kept there by strong traction. The assistants draw the edges of the abdominal wound together, compressing them about the uterine neck. The after-birth is not detached and removed until, by means of these precautions, the penetration of blood into the peritoneal cavity is prevented. The pedicle of the tumor formed by the uterus and its appendages, is clasped by the loop of a linear écraseur, and tightened sufficiently to arrest the flow of blood. All the parts are then removed with the bistoury to within two centimeters of the chain of the écraseur, then the stump thus obtained is traversed by a long needle through its base, which prevents its retraction within the abdominal cavity. The lips of the abdominal wound are united to each other or with the base of the stump by sutures. All the portion of the stump beyond the chain of the écraseur falls at the end of several days, the rest becomes adherent to the abdominal walls, and the cicatrization is complete at the end of a month or six weeks.

Since the 21st of May, 1875, the utero-ovarian operation has been performed fifteen times. An Italian journal, (*Annali uni-*

versali di Medicina e Chirurgia, Nov. 1878), gives a statistical table of these fifteen cases; we reproduce it, as it is better calculated to show the advantages of the new method than any theoretic reasoning.

In 1875, utero-ovarian amputaton was performed once only, May 21, at Pavia, by Prof. Porro; the patient, as we have said, got well in six weeks.

In 1876, three operations; two at Vienna by Prof. Spaeth, giving one death and one success; a third, also at Vienna, by Prof. Braun, followed by death.

In 1877, four operations, all followed by death; one at Milan by Prof. Chiara; a second at Fribourg by Prof. Hegar; a third at Bergamo, by Dr. Previtali; the fourth at Berne, by Prof. Muller.

In 1878, seven operations; at Milan, by Prof. Chiara, two cases, one death and one cure; at Turin, Prof. Tibino, one death; at Liege, Prof. Wasseige, one cure and one death; at Prague, Prof. Breisky, one death; at Brescia, Dr. Peroglio, one cure.

Seven cures and eight deaths; a result not sufficient to remove the dread of Cæsarean section, but when compared with the old plan we cannot help recognizing that the process of Porro constitutes an important progress, one deserving its adoption in the practice of our hospitals.

GYNÆCOLOGY.

PECULIAR ACTION OF TINCTURE OF IODINE ON THE CERVIX UTERI. (*Bulletin de Thérap.*, August 30th, 1878.)

M. Laboulbène says, that tincture of iodine colors the healthy cervix a uniform, dark brown. But if slight ulcerations or granulations or vegetations exist, the affected patch is colored yellow. This may afford a delicate means of diagnosis. If the cervix be large and the tincture produce patches of yellow color, a neoplasm may be apprehended, with approaching ulceration in the points least colored. Under any circumstances as a healthy state is approached, the discoloration caused by the iodine assumes more and more the dark brown hue.

PATHOLOGY.

TRANSPLANTATION OF TISSUES. (*Lancet*, August 24, 1878).

Dr. Zahn has carried out a systematic series of experiments on this subject, first with hyaline and then with fœtal cartilage. The tissues into which the fragments were implanted, were connective tissue, the anterior chamber of the eye, the sub-maxillary glands and the kidneys, testicles and blood vessels. These attempts yielded negative results until fœtal cartilage was employed. If some of the latter were rubbed up with amniotic fluid and injected in the jugular vein, numerous cartilaginous growths were subsequently found in the lungs; and if used in other ways the same effect was produced. The capacity of fœtal cartilage is so great that specimens from the fœtus of a cat gave rise to nodules in the rabbit. Experiments with cartilage from an enchondroma were less successful than the above, but more so than when ordinary adult cartilage was used.

Zahn was also successful with other fœtal tissues. Entire bones were implanted, and although they did not grow as a whole, they preserved their form, and outgrowths occurred. Zahn concludes that only fœtal tissues, or those adult tissues which preserve their fœtal peculiarities, can develop in another part of the same or in another animals. Only, for instance, red marrow will do so, and the periosteum of young individuals.

MATERIA MEDICA AND THERAPEUTICS.

BUTYL CHLORAL. Liebreich. (*Lancet*, July 20, 1878).

It is known that Croton chloral seems to have a selective tendency in its action, affecting first the branches of the fifth pair of nerves.

According to Liebreich, butyl chloral possesses this same peculiarity in a more marked degree. Narcosis may follow very large doses, to be sure, but anæsthesia of the head and face may be complete before any trace of narcosis manifests itself. Liebreich therefore recommends this drug in operations on the face, when other anæsthetics are contra-indicated. For this purpose the dose is 1.0 to 2.0.

While chloral hydrate paralyzes circulation before respiration, the reverse is true with butyl chloral. L. showed this beautifully by opening the thorax in two rabbits, one narcotized with chloral hydrate, the other with butyl chloral. In each case the thorax was opened just as respiration ceased; in the former the heart was lying motionless; in the latter it continued to beat, so long as artificial respiration, which was practiced in both cases, was continued. He thought this property showed the advantage of the drug for purposes of vivisection.

L. refers to the value of the drug in that distressing complaint, tic douloureux, and advises to administer it in glycerine and water, instead of in alcohol, in doses of 1.0 to 2.0.

OIL OF ROSEMARY. Köhler and Schreiber. (*Centralbl. Med. Wiss.*, *No.* 23, 1878.)

These writers have investigated the physiological action of this drug. They find its chief action to be upon the cerebro-spinal nerve centers. The blood pressure falls owing to paralysis of vaso-motor centers in the medulla, but the heart is unaffected; and if the drug is pushed to its utmost there is only retardation of the pulse, while the respiratory center is at last paralyzed. Small doses increase and large doses diminish reflex excitability; repeated hypodermic injections of small amounts have the latter effect. Large doses antagonize the irritability of strychnia poisoning. But its most important action is on temperature, though for this purpose it must be inhaled in a vaporized form, and not given by the stomach. By the former method temperature may be reduced 8°, while by the latter it can not be lowered more than 2° centigrade. These experiments were made in rabbits and other animals.

The writers do not find that on rabbits it has any abortive action. It may excite peristalsis and so produce slight diarrhœa. It seems also to have diuretic properties, and the urine passed after its ingestion has a violaceous odor. Neither muscular irritability nor the size of the pupil are affected by its use.

If its antipyretic effects are certain, and do not differ whether a human subject be the object of experiment, or a rabbit, a most valuable remedy can be added to our armamentarium.

Items.

BULLETIN OF THE PUBLIC HEALTH, Issued by the Surgeon-General U. S. Marine Hospital Service under the National Quarantine Act of 1878. Week ended February 15th, 1879. No. 32.

OFFICE SURGEON-GENERAL M. H. S.
WASHINGTON, Feb. 19th, 1879.

Boston.—Week ended Feb. 15th. Deaths from all causes, 155, an annual ratio of 22.1 per 1,000 of the population; 18 cases of scarlet fever, 2 deaths; 22 cases of diphtheria, 9 deaths. Bronchitis caused 6 deaths, pneumonia 19, phthisis 26.

Providence.—Week ended Feb. 15th. Total deaths, 41. An. ratio, 21; 5 deaths from scarlet fever, 5 from diphtheria. "Scarlet fever prevalent and increasing."

New York.—Week ended Feb. 15th. Total deaths, 544. An. ratio, 26.3; 69 deaths from scarlet fever; 12 from diphtheria, 18 from whooping-cough, 35 from bronchitis, 55 from pneumonia, 101 from phthisis.

Hudson County N. J. (Including Hoboken and Jersey City.)—Week ended Feb. 15th. Total deaths, 61. An. ratio, 16. Enteric fever caused 3 deaths, scarlet fever 2, diphtheria 3, acute lung diseases 9, phthisis 10.

Brooklyn.—Week ended Feb. 15th. Total deaths, 222. An. ratio, 20.4; 5 cases of enteric fever, 2 deaths; 71 cases of scarlet fever, 9 deaths; 44 cases of diphtheria, 11 deaths; 40 deaths from acute respiratory diseases, 33 from phthisis.

Buffalo.—Week ended Feb. 15th. Total deaths, 31. An. ratio, 12; 4 deaths from scarlet fever, 2 from diphtheria.

Philadelphia.—Week ended Feb. 15th. Total deaths, 349. An. ratio, 21. Enteric fever caused 5 deaths, scarlet fever 9, diphtheria 9, acute pulmonary diseases 71, phthisis 60.

Pittsburgh.—2 weeks ended Feb. 15th. Total deaths 121. An. ratio, 21.7. Enteric fever caused 5 deaths, scarlet fever 3, diphtheria 11 deaths.

Baltimore.—Week ended Feb. 15th. Total deaths, 160. An. ratio, 22.8; 1 death from enteric fever, 6 from scarlet fever, 10 from diphtheria, 31 from acute pulmonary diseases, 25 from phthisis.

District of Columbia (Including Washington and Georgetown). Week ended Feb. 15th. Total deaths, 87. An. ratio, 28.3. Scarlet fever caused 3 deaths, diphtheria 2, acute pulmonary diseases 18, phthisis 18.

Chicago.—2 weeks ended Feb. 15th. Total deaths, 244. An. ratio, 14. Enteric fever caused 6 deaths, scarlet fever 5, diphtheria 16, acute lung diseases 42.

Milwaukee.—Week ended Feb. 15th. Total deaths, 40; rate, 18; 5 deaths from diphtheria.

Louisville.—Week ended Feb. 15th. Total deaths, 58. Annual ratio, 19. Diphtheria caused 1 death, acute lung affections 16, phthisis 8.

St. Louis.—2 weeks ended Feb. 15th. Total deaths, 215. An. ratio, 11.2. Enteric fever caused 1 death, scarlet fever 2, diphtheria 5, phthisis 36, pneumonia 29.

Richmond.—2 weeks ended Feb. 15th. Total deaths, 67. An. ratio, 22. Scarlet fever caused 8 deaths, acute lung diseases 9, phthisis 8.

Savannah.—2 weeks ended Feb. 15th. Total deaths, 41. An. ratio, 38. Death-rate among the negroes twice as great as among the whites.

Mobile.—Week ended Feb. 15th, 17 deaths. An. ratio, 22; 1 death from diphtheria. "City very healthy with exception of epidemic of influenza."

New Orleans.—Week ended Feb. 9th. Total deaths 87. An. ratio, 22. Acute lung diseases caused 14 deaths, phthisis 17. No deaths reported from scarlet fever or diphtheria.

San Francisco.—Week ended Feb. 7th. Total deaths, 101.

An. ratio, 17.5. Enteric fever caused 2 deaths, scarlet fever 1, diphtheria 4, acute lung diseases 18, phthisis 15.

Havana.—Week ended Feb. 15th. Yellow fever caused 1 death, small-pox 15.

Great Britain.—Week ended Feb. 1st. The average death-rate of the 23 large cities was 28. Dublin, 49; Liverpool, 36; Manchester, 35; Glasgow, 29; Edinburgh, 25; Sheffield, 25.

London.—1821 deaths. An. ratio, 26. Measles caused 23 deaths, scarlet fever 33, diphtheria 14, whooping-cough 64, acute lung diseases 541; 28 deaths from small-pox in London; 21 in Dublin.

German Empire.—2 weeks ended Jan. 18th. In 150 cities there were 7,446 deaths, an average annual rate of 26 per 1,000. Measles caused 94 deaths, scarlet fever 184, diphtheria 352, whooping-cough 105, acute lung diseases 666, phthisis 1,015.

Paris.—Jan. 24th to 30th. Deaths, 1,109. Small-pox caused 8, diphtheria 28, enteric fever 21.

Vienna.—Jan. 19th to 25th. Deaths, 42. Rate, 30. Small-pox caused 13 deaths, diphtheria 21.

St. Petersburgh.—Jan. 12th to 18th. Deaths, 623. Rate, 48. Small-pox caused 58 deaths.

Rio de Janeiro.—2 weeks ended Jan. 18th. Deaths, 393. An. ratio, 34. Yellow fever caused 30 deaths, small-pox 30, enteric fever 11, "pernicious" fever 20. No deaths from diphtheria or scarlet fever reported.

The U. S. Consul at Pernambuco reports that in the interior of the province of Ceara a severe drought has prevailed for two years and a half, no rain having fallen during that time. The excessive dryness caused the disappearance of the innumerable small streams which furnished the whole water supply of the country, the consequent death of nearly all the cattle and sheep, and the complete destruction of the usual means of subsistence of the population, which is wholly an agricultural one. The people have been reduced to subsistence on roots, cotton-pods, reptiles and any living or dead thing that would sustain life, some resorting even to cannibalism. In the winter of 1878 small-pox appeared in epidemic form and caused a frightful mortality among the starving people. A general flight of the people from

the interior to the coast cities occurred. The normal population of 25,000 in Fortaleza, the capital, was quickly raised to 100,000, the squares of the city being filled with thousands of unsheltered people dying of disease and starvation. One-half of the original population of the city have died of small-pox. In the new cemetery of Lagoa Funda, opened in the middle of last year, there were 60,000 interments up to Jan. 1st. The number of burials from small-pox alone between Nov. 1st and Jan. 1st in this cemetery were 24,470; the total interments in the city for the two months being 31,571. At Parahyba 12,000 refugees out of 15,000 who had fled to the port died, and similar distressing accounts are given of the other coast cities. The Consul estimates the usual population at 900,000, of whom 500,000 have died of disease and starvation. The Brazilian Government have expended $10,000,000 for the relief of the sufferers. At last advices slight rains have fallen in the interior, and it is believed that the worst period of the scourge has been passed.

JNO. M. WOODWORTH,
Surgeon-General, U. S. Marine Hospital Service.

AN ATTEMPT AT BLACKMAILING A PHYSICIAN, in which the other party got the worst of it.

In August of last year, a certain Joseph Clem received an injury in his right eye from being struck by a gun cap; he consulted Dr. M. F. Coomes, of Louisville, and put himself under his care for some time. He did not pay the doctor's bill for the sum of twenty-two dollars, but sued him for malpractice, alleging "that his eye was unskillfully treated by the defendant, while treating his eye as his physician and oculist, and that, by reason of said unskillful treatment, he has been damaged to the extent of one thousand dollars ($1.000), and that he fears he will lose entirely the sight of said eye because of said unskillful treatment."

Dr. Coomes, in his answer, makes the following statement:

"The lower margin of the right eye was wounded about a quarter of an inch from the inner angle; that there was a rent in the conjunctiva about one-third of an inch in length, running downward and inward from the margin of the cornea, and there

was also a corresponding rent in the sclera, which extended on into the cornea for a line or a line and a half.

There was a considerable rent in the inner and inferior quadrant of the iris, and a portion of the iris was between the lips of the wound, and was dragged out until it was almost in contact with the margin of the lower lid. The pupil was elongated downward and inward, the wound extending through the ciliary region, with considerable hemorrhage from the wound.

The plaintiff at this time could distinguish light from darkness. He said the light looked reddish, and he could not give the definite outline of any object. The cavity of the globe was filled with blood, so as to render an ophthalmoscopic examination impossible. The iris was almost hidden by blood, and the pupil was completely closed with it."

A solution of atropia (0.25 to 30.0), was dropped into the eye, and a wet compress applied.

"Defendant says that when he looked at the eye he told the plaintiff that the chances were against its recovery for visual purposes; that if any portion of the cap was buried within the cavity of the globe, the eye would be lost for visual purposes, and that even if the foreign substance was not there it was not likely the eye would ever be entirely recovered; but every chance was given the eye of the plaintiff to allow the hæmorrhage to clear up and permit a more thorough examination. Defendant told the plaintiff at the time that if the foreign body was in the cavity of the globe, violent inflammation would intervene, and that it would then be safe to remove the globe at once—inflammation did afterwards set in.

Defendant requested plaintiff to consult any physician or oculist he desired, and assured him the exercise of such a right would cause him (the defendant) no unkindly feeling, but, on the contrary, he would be gratified if the opinion of some one else would be had.

Plaintiff did go to another oculist, and made an appointment to have the injured eye removed. But for some reason unknown to defendant, this was not done."

Before the doctor's answer was presented to the court, the attorney for the plaintiff attempted to compromise the suit.

These attempts were renewed from time to time, first offering to accept $500, then $100, then $50; and, finally, after failing to induce the court to strike out all that part of the defendant's answer relating to the treatment of the plaintiff, his attorney took a copy of the answer and went around the city trying to find some doctor willing to express an unfavorable opinion of defendant's treatment of plaintiff. Failing in this, he refuses to go to trial, and moves the dismissal of the suit he has brought.

Whereupon the court dismissed the suit, but, at the same time adjudged that the defendant recover of the plaintiff his costs herein expended, and may have execution.

TESTS FOR CARBOLIC AND CRESYLIC ACIDS, AND CREASOTE. (*Chemist and Druggist.*)

Pure carbolic acid takes up 26 to 27 per cent. of water to form a hydrous acid. Cresylic acid absorbs only 13 or 14 per cent. Absolute carbolic acid is solid at ordinary temperatures, and the hydrous acid in freezing mixtures. Neither absolute nor hydrous cresylic acid, nor creasote show any signs of freezing on exposure to the same cold. Absolute carbolic acid dissolves in 10.7 parts of cold water; absolute cresylic acid in 31 parts. Benzol mixes with either in any proportions and separates the water from the hydrous acids; benzoline mixes with cresylic acid and creasote in all proportions, but carbolic acid will not take up more than half its volume. The two acids mix in any proportion with Price's glycerin, but creasote will not dissolve in it. A mixture of one part of carbolic acid with one of glycerin is not precipitated by the addition of three parts of water; a similar mixture of cresylic acid and glycerin is precipitated by adding two parts of water. The addition of one drop of a 10 per cent. aqueous solution of ferric chloride to 15 C. C. of an aqueous solution of either acid causes a permanent violet-blue coloration; when creasote is similarly tested a blue color results, but almost instantly changes to green or brownish yellow.

Cresylic acid constitutes an ingredient or impurity of commercial carbolic acid.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, March 3 and 17.
West Chicago Medical Society—Mondays, March 10 and 24.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.
Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Dr. Hyde; 3 p. m., Medical, by Dr. Bridge.
Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.
Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.
Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman; 4 p. m., Diseases of the Chest, by Prof. Ross.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.
Woman's Medical College—11 a. m., Ophthalmological, by Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.

THE

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[In these pages dimension and weight are expressed in terms of the Metric System, and temperature in degrees of the Centigrade Scale.]

Original Lectures.

ARTICLE I.

HEREDITARY TAINTS. An illustrated lecture delivered before the Chicago Medical Society, Feb. 17th, 1879, by EPHRAIM CUTTER, M.D., Boston.

"*Nothing taints sound lungs sooner than inspiring the breath of consumptive lungs.*"—*Harvey.*

Hereditary traits are those which are transmitted from parent to child. They may be good or bad. The latter are called taints (Greek, *teggo*, to wet: Latin, *tingere*, to dye or tincture.) To-day the subject involves heredity, which also includes physical, psychological, civil, social, political and monetary abilities and disabilities.

In compliance with your expressed desire to see what I have to show and to hear what I have to say, I come as a private from the picket line to report to his superiors—didactically, not polemically. "To prevent rash misconceptions and uncandid reflections that are always apt to arise from a partial view of any subject," allow me to say that I am prepared to be challenged, and

to encounter opposite opinions—that I desire to be respectful to all—that I honor an honest, gentlemanly, though severe critic, but any discourteous treatment of my subject I regard as beneath the dignity of science; that my presentation of the subject is the fruit of years of toil and investigation, and is what I honestly believe it is here represented to be. If shown to be mistaken, I am ready to apologize, but I will not ask pardon for acting up to my convictions. Time alone can decide the questions raised.

In his voluminous, painstaking and authoritative work, Dr. Lionel Beale has extensively promulgated his idea respecting an hereditary taint, teaching that the primitive, formative, animal vital matter called by Mohl protoplasm (*proto*, first; *plasm*, form, mould or substance), and by him (Beale) called bioplasm, (*bio*, life; plasm), (Dr. L. Elsberg calls it better, bioplasson, life *forming*, instead of form)—has a degenerative or lowered type impressed upon it so that it develops what we call disease. In other words, that the taint consists of bioplasm running riot under mob law, breaking through the bodily systemic restraint that governs the various minor organisms of substance, which, when combined in a well-ordered and systematic colony we call a healthy human being. Dr. Beale has rendered a great service to mankind by liberating us from the thralldom of the cell doctrine. The greatness, number and value of his contributions to micrology (*micros*, small; *logos*, account), have made him famous. If I understand him rightly, cancer, syphilis and consumption—to name no more examples—are hereditary in that the dyed or tinged, or tinctured bioplasm in the parent is transmitted to the child—that it is not any morphologically distinctive thing, but is only discernable through the ruin wrought by its development—as seedsmen tell seeds by cultivation. If my opinion were asked, I would say that this doctrine is admirable for the cancerous diathesis, but as far as concerns the other diseases named, there is another man who, in 1868, propounded another doctrine—incidentally, as a matter of history, not intending to conflict with nor derogate from any other theorist. In the *American Journal of the Medical Sciences* for Jan., 1868, page 19, line 12, occur these words: (the title of the paper is "New Algoid Vegetations in Syphilis, etc.")—"This vegetation may

be transmitted from one individual to another during the secondary and tertiary stages under proper conditions, without producing the primary disease. I have noticed many instances in which, the father having had the disease previous to marriage, and when the poison was not entirely eliminated, even though no outward manifestation of the disease had shown itself in him after marriage, this vegetation was transmitted to, and found in the blood of the wife and children many years after. In many cases of this kind, this vegetation produces no visible impression upon the systems to which it is transferred, while upon others it produces more or less marked constitutional disturbance." That is, the vegetation found in the blood of the parent is found in the blood of the child, and thus we have an hereditary taint which is a physical substance capable of being seen, the seeds, so to speak, of which are smaller than the red corpuscles, and therefore capable of infecting the child through the medium of the blood, it being an evident mechanical proposition that as the blood corpuscles of the mother are freely transmitted to the fœtal circulation, then any bodies smaller than the red corpuscles floating in the maternal blood will of necessity be readily found in the blood of the embryo, or, to put it differently, the seeds of the vegetation are the seeds of the disease, and find their way into the blood of the fœtus through the placenta.

It is my design to throw upon the screen some physical evidence of this statement. A ten years experience is my warrant for presenting it. I have found this evidence of practical value. Quietly I have been able to settle in my own mind, without using words, the diagnosis of syphilis, and to institute treatment accordingly, which the result has proved to be correct. Were this a matter of scientific interest alone, I should not feel justified in staking my professional character and reputation by appearing before you with my present purpose. I am only following in the steps of my great master, "whose shoe-latchet I am unworthy to loose." Who is this master? The following is a list of his works up to July, 1878: there are 42 papers and books, and 20 unpublished works and papers. I am not competent to express an opinion as to all, but I do know that some of them show a clearer insight into the nature of our common and most fatal

diseases than I have found elsewhere. I respectfully ask a careful perusal of this list, should copies of it come into your possession.

PUBLISHED WORKS AND PAPERS OF J. H. SALISBURY, A.M., M.D.

1. Analysis of Fruits, Vegetables and Grains. N. Y. State Geological Reports. 1847-48-49.

2. PRIZE ESSAY.—Chemical Investigation of the Maize Plant in its various stages of growth, with the temperature of the soil at various depths, and that of trees in different seasons of the year. 206 pages. State Agricultural Reports of N. Y. and Ohio. 1849.

3. Chemical Analysis of Five Varieties of the Cabbage. 1850.

4. Rheum Rhaponticum. Chemical examination of the various parts of the plant. 1850.

5. Chemical Examination of Rumex crispus. 1855.

6. Experiments and Observations on the Influence of Poisons and Medicinal Agents upon Plants. 1851.

7. Chemical Examination of the Fruit of five (5) varieties of Apples. 1850.

8. Chemical Investigations connected with the Tomato, the Fruit of the Egg Plant, and Pods of the Okra. 1851.

9. History, Culture and Composition of Apium graveolens and Cichorium intibus. 1851.

10. Some Facts and Remarks on the Indigestibility of Food. 1852.

11. Compositions of Grains, Vegetables and Fruits. Ohio State Agricultural Reports. 1861.

12. Microscopic Researches, resulting in the discovery of what appears to be the cause of the so-called "Blight" in Apple, Pear and Quince Trees, and the decay in their fruit: and the discovery of the cause of the so-called "*Blister and Curl*" in the leaves of Peach Trees; with some observations on the development of the Peach Fungus. Illustrated with 6 plates. Ohio State Agricultural Reports. 1863.

13. Chronic Diarrhœa and its Complications, or the diseases arising in Armies from a too exclusive use of Amylaceous Food, with interesting matter relating to the Diet and Treatment of these abnormal conditions, and a new Army Ration proposed with which this large class of diseases may be avoided. The Ohio Surgeon General's Report for 1864.

14. Something about Cryptogams, Fermentation and Disease. St. Louis *Medical Reporter*, February, 1869.

15. Probable Source of the Steatozoon folliculorum. St. Louis *Medical Reporter*. January, 1869.

16. Investigations, Chemical and Microscopical, resulting in what appears to be the Discovery of a New Function of the Spleen and Mesenteric and Lymphatic Glands. Do. August, 1867. 29 pages.

17. Defective Alimentation a Primary Cause of Disease. Do. March and April 1 and 15, 1868. 70 pages and two plates of illustrations.

18. On the Cause of Intermittent and Remittent Fevers, with Investigations which tend to prove that these affections are caused by certain species

of Palmellæ. *American Journal Medical Sciences*, 1866. Also in *Revue Scientifique*. November, 1869.

19. Some Experiments on Poisoning with the Vegetable Alkaloids. *American Journal Medical Sciences*. October, 1862. 28 pages.

20. Discovery of Cholesterine and Seroline as secretions in health of the Salivary, Tear, Mammary and Sudorific Glands; of the Testis and Ovary; of the Kidneys in Hepatic Derangements; of Mucous Membranes when congested and inflamed, and the fluids of Ascites and that of Spina Bifida. Do., April, 1863. 2 plates. 17 pages.

21. Remarks on Fungi, with an Account of Experiments showing the influence of the Fungi of Wheat and Rye Straw on the Human System, and some observations which point to them as the probable source of Camp Measles, and perhaps of Measles generally. Do., July, 1862. 1 plate. 20 pages.

22. Inoculating the Human System with Straw Fungi to protect it against contagion of Measles, with some additional observations relating to the influence of Fungoid growths in producing disease, and in the Fermentation and Putrefaction of Organic Bodies. Do., October, 1862. 8 pages.

23. Parasitic Forms Developed in Parent Epithelial Cells of the Urinary and Genital Organs, and in the Secretions. With 34 illustrations. Do. April, 1868.

24. Remarks on the Structure, Functions and Classification of the Parent Gland Cells, with Miscroscopic Investigations relative to the causes of the several varieties of Rheumatism, and directions for their treatment. 1 plate of illustrations. Do., October, 1867. 19 pages.

25. Microscopic Researches relating to the Histology and Minute Anatomy of the Spleen and Lacteal and Lymphatic Glands, showing their ultimate structure and their organic elements, of their highly interesting and important functions, with some remarks on the cause of ropiness of Mucus and the tendency of all healthy and many diseased cells to be metamorphosed into filaments. 1 plate. 34 pages. Do., April, 1866.

26. Description of two new Algoid Vegetations, one of which appears to be the specific cause of Syphilis and the other of Gonorrhœa. With 16 illustrations. Do., 1867. Also *Zeitschrift für Parasitenkunde*. 1878.

27. Geological Report of the Mill Creek Canal Coal Field. With one map and two plates. Published in Cincinnati, 1859.

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28. Experiments on the Capillary Attractions of the Soil, explaining some important and interesting principles and phenomena in Agriculture and Geology. *The American Polytechnic Journal*. 1853.

30. A New Carbonic Acid Apparatus. Do., 1853.

31. Analysis of Dead Sea Water. 1854.

32. Two Interesting Parasitic Diseases; one we take from sucking kittens and the other from sucking puppies—Trichosis Felinus and T. Caninus. *Boston Medical and Surgical Journal*, June 4th, 1868. 6 illustrations. Also, *Zeitschrift für Parasitenkunde*, Hallier. Jena., 1875.

33. Pus. and Infection. *Boston Journal of Chemistry.* January, 1878.

34. Microscopic Examinations of Blood and the Vegetations found in Variola, Vaccine and Typhoid Fever. 66 pages and 62 illustrations. Published by Moorehead, Bond & Co., New York. 1868.

35. Vegetations found in the Blood of Patients Suffering from Erysipelas. *Halliers Zeitschrift für Parasitenkunde.* 1873. 8 illustrations.

36. Infusorial Catarrh and Asthma. 18 illustrations. Do., 1873.

37. Analysis, Organic and Inorganic, of the White Sugar Beet. The *Albany Cultivator.* October, 1851.

38. Analysis, Organic and Inorganic, of the Parsnip. N. Y. State Agricultural Report. 1851.

39. Ancient Rock and Earth Writing and Inscriptions of the Mound-builders, with a description of their fortifications, enclosures, mounds and other earth and rock works. 49 plates. In the hands of the American Antiquarian Society, and only partly published in their transactions and in the Ohio Centennial Report. 1863.

40. Influence of the Position of the Body upon the Heart's Action *American Journal Medical Sciences.* 1865.

41. Material Application of Chemistry to Agriculture. The *Albany Cultivator.* 1851.

42. Analysis, Organic and Inorganic, of the several kinds of Grains and Vegetables. The *Albany Cultivator.* August, 1849.

UNPUBLISHED WORKS AND PAPERS.

1. Diphtheria, its Cause and Treatment. 3 plates of illustrations. 1863.

2. Asthma, the various forms of, and their causes and treatment. 3 plates of illustrations. Ready for press since 1866.

3. Consumption, its Causes and Treatment. 4 plates. Ready for press in 1867.

4. Hog Cholera, its Cause and Prevention. 1858.

5. Ultimate Structure and Functions of the Liver. 1865. 3 plates.

6. Ultimate Structure and Functions of the Kidneys. 1864. 3 plates.

7. Geological Report of the Coal Fields of Virginia and Kentucky. 1857. With maps and many illustrations.

8. Histology of Plants. Prize Essay. 65 illustrations. 1848.

9. Causes and Treatment of "Bright's Disease." 1865.

10. Causes and Treatment of Diabetes. 1864.

11. Causes and Treatment of Goitre, Cretinism, Ovarian Tumors and other Colloid Diseases. 1863.

12. Causes and Treatment of Progressive Locomotor Ataxy. 1867.

13. Cause and Treatment of Fatty Diseases of the Heart, Liver and Spleen. 1864.

14. Cause and Treatment of Paresis. 1865.

15. One of the Most Common Causes of Paralysis, with Treatment. 1867.

16. Microscopic Examinations connected with Spermatozoa and Ova, with contents of Pollen Grains and Modes of Development of Zoosporoid Cells. 1860.

17. Cryptogamic Spores in the Tissues of the Living Animal. Their development in food one source of disease, and a cause of fermentation, gangrene or death and decay in organized bodies. 7 plates and 102 illustrations.

18. Microscopic Investigations connected with the Exudation and Expectoration of Angina membranacæ and Gangrenosa and Scarlatina Anginosa, resulting in the discovery of their true source, and the pathological process by which the exudations are produced; and the further discovery of a peculiar fungus belonging to the Genus Peronospora, developing in the sloughs and membranes, the spores of which are infectious and produce the disease; also some general conclusions on the Ætiology of Fevers, the peculiar functions of the Epithelial cell envelope, and the probable way in which the system receives a more or less permanent protective immunity by one attack of certain contagious diseases against a second invasion of the same. 3 plates. 160 illustrations. 1862.

19. Description of several new species of Ascaridæ found on and in the human body, and a brief account of several new Entozoa. 2 plates and 30 figures. 1865.

20. Investigations connected with the Cause and Treatment of Paralysis of the Will, Paralysis of the Memory and Paralysis of the entire Intellectual and Moral Faculties, causing a peculiar mental state and Insanity.

Dr. Salisbury regards the vegetation in syphilis as a true taint, since it will grow in any one to whom it is communicated by infection. The taint in consumption is not so readily imparted by infection. It is made up of vegetative spores of a yeast in the blood, not exactly the ordinary domestic yeast, but a saccharine, acid, fermentative vegetation that thrives on starch and sugar. It is found in the blood of the parent. It is found in the blood of the child. It exists in a latent state and is found also one year before organic lung disease. I have seen Dr. Salisbury's records of the autopsies of 104 frogs killed by inducing consumption in them artificially. (Ready for the press in 1867.) I call this the synthesis of the disease. Also I show you bread raised with the yeast found in the diarrhœal dejections of a third stage consumptive, made at Dr. Salisbury's suggestion, and following the same course he pursued years ago. He was unable to raise bread with healthy fecal dejections. I am now engaged in the effort to publish Dr. Salisbury's works on the causes and treatment of consumption based on 1,000 cases, ready for the press in 1867, corroborated by me. Fasciculus I, A New Physical Sign of the Pretubercular State; II, Morphology of Consumptive Blood; III, Treatment on the Salisbury Plan. About 1,500 page

of manuscript fully illustrated. In this work will be found the fullest account of the author's views on the subject of tubercle. Upon consultation it has been deemed best to publish it by subscription, and my effort is to secure 1,000 subscriptions. I respectfully ask your encouragement in this undertaking.

Your attention is now directed to the question 1, What is yeast? This is a cryptogamic vegetation, well known to man from the earliest ages of antiquity, and now of common use in every household, growing concealed in the darkness where there are warmth and moisture, a plant that is little larger than a red blood corpuscle; a plant that produces alcohol, that has a kinetic energy of 200 lbs. to the square inch; one that is a protoplasm, and that thus furnishes a clear illustration of a fungus and of what the author regards as an hereditary taint. We will show these and a few other fungi, some of which are nocent and some innocent. 2. I show a few algae, some nocent and some innocent, in order to exhibit a genus of parasitic vegetations that includes 20,000 species—(fungi, 8,000, Reinsch)—so that you may see what they resemble, and may realize that the opposition to the germ theory of disease is fallacious, since it is based upon the idea that because so many fungi are innocent, therefore they *all are*. Mushrooms are fungi, and people have been known to die, poisoned by eating them. 3. I show what blood is morphologically in healthy men, and in some animals. 4. The form element found in syphilitic blood, constituting the taint. 5. Consumptive blood taints. 6. Two photographs showing the physical effects on the blood of the Salisbury plan of treatment. 7. Sources of error.

List of microphotographs shown, most of them taken with Tolles' objectives.

1. Microphotographic apparatus of the writer.

2. Vaccine virus, 1-10th inch objective, to illustrate Beale's doctrine.

3, 4, 5, 6, 7, 8, 9. Yeast plants, spores, barley, starch, grain, 1-50th. (For the sake of brevity the words "inch, objective," are hereafter omitted.)

10. Budding of yeast. After Mitscherlich diagram.

11, 12. Mycelial filaments found in connection with yeast; aërial, 1-10.

13. Yeast sporangia, 1-75.

14. Butyric acid, fermentative vegetation, (rancid butter), 1-10.

15. Lard, 1-10.

16. Sewer gas fermentative vegetation, 1-10.

17. Diphtheritic membrane kept 3½ years, in full strength carbolic acid, 1-10.

18. Algae. Leptothrix buccalis from mouths, innocent, ¼.

19. Algae infesting other algae, some nocent and some innocent. After Reinsch.

20. Innocent parasitic algae in a Key West sea weed, Reinsch, ¼.

21. Cosmarium binoculatum infested by an alga that kills its hosts. Cochituate water, 1-10, R.

22. Healthy blood, horse, 1-50.

23. Healthy blood, man's, living white corpuscle, 1-50.

24, 25, 26. Amœboid movement of white blood corpuscle—photos. of drawings made from images thrown upon a screen with the sun, from life, 1-5.

27. Human red blood corpuscles, dry, 1-75.

28. Rat's blood, dead, 1-50.

29. Ox, alive, 1-50.

30. Horse, 1-50, alive.

31. Rabbit dead and frozen, 1-50.

32. Sheep, alive, 1-50.

33. Deer dead and frozen, 1-50.

34. Dog, alive, 1-50.

35. Mouse, dead, 1-50.

36. Trout dead and frozen. The last nine were taken at the same amplification for medico-legal comparison.

37. Blue bird's blood, 1-16.

39. Frog's blood, 1-50.

40. Blood filled with spores that may be syphilitic or consumptive, distinguished under the microscope (not in photo.) by the copper color, 1-10. Wet.

41. 3 white corpuscles, syphilis—enlarged—wet, ¼.

42. Mycelial filaments, syphilis—wet, ¼ enlarged.
43. " " " dry, 1-50.
44. " " " wet, 1.16.
45. " " " enlarged.
46. White and red corpuscles, syphilis, 1-50.
47, 48. White and red corpuscles, syphilis, 1-75.
49. Pretubercular blood showing spores—an hereditary taint —found one year before organic lung disease, wet.
50. Collection of mycelial filaments, consumptive, 1-5. Blood dried under the cover.
51. Consumptive blood drying under cover, vacuolated, shows the futility of taking blood home for examination after several days.
52. Mycelial filament, consumptive blood, wet, ¼ enlarged.
53. Dried mycelial filaments traversing an air bubble—wet and drying up, 1-10.
54. White blood corpuscles, consumptive, 1-50.
54. 4 " " " 1-50.
56. 3 " " " 1-75. First photo. taken with this objective.
57. White blood corpuscle showing entophytal growth, consumptive, 1-50, certified to by Prof. Reinsch.
58. Fibrin filaments, 1-16 wet, consumptive. Foreign substances liable to be mixed with the blood.
59. Hair, 1-10; consumptive, wet.
60. Epithelial scale from the skin, 1-10 wet.
61. Cotton fiber fibrillated, wet, 1-10.
62. Dust from furniture, wet, 1-10.
63. Common toilet soap, 1-10.
64. Typical 3d stage consumptive blood, 1-16, dry.
65. " " " " three months on the Salisbury plan, 1-16, dry,

In order to do justice to my associate, allow me to say that this microphotographic work was done with the assistance of Dr. G. B. Harriman, dentist, of Boston, the owner of the 1-50 and 1-75 inch objective, which he has allowed me to bring. He is also the discoverer of fibers in Dentine (*American Journal of Dental*

Science, May, 1870), and of nerve fibers in the soft solids of the Dentine (*Dental Cosmos*, January, 1870.)

The following extract from the *Journal de Micrographie*, Paris, November, 1877, is the concluding portion of a notice by Dr. Pelleton of the work done by Dr. Harriman and other microphotographers of Boston. Some of the specimens exhibited to you this evening were included in the collection to which Dr. Pelleton refers:

"To sum up, these microphotographs, which we think ought to interest our readers for a long time, because of the considerable interest which the photographic reproduction of microscopic objects presents are remarkable; and so much the more as all have been executed by, except, of course, those who transferred the impression to the stereotype plate, doctors, who are amateurs, and not by professional photographers. The work is of a nature to give a high idea of the objectives with which the views have been obtained; and we can compare them only to the best photographs executed by Dr. Woodward with the $\frac{1}{8}$ and 21-16 inch objectives of Powell and Lealand, or by some European operators with obectives of Hartnack and Prazmonski; but if we think we have seen some which are as remarkable, we do not think we have encountered any that are their superiors."

It remains for me to thank you for your fair hearing. I do not ask your endorsement of my views. It took three years to satisfy myself. I hope it will not take you so long; nor do I hope you will dismiss the question at once by declaring the whole matter visionary—a matter of mere words—the vagaries of an enthusiastic microscopist. On general principles, those who study a subject most, are usually conceded to know the most about it. Dr. Salisbury began in 1857, I in 1868; hence it is hoped that some of your careful observers may be induced to go over the ground for themselves, carefully, in actual cases—not deciding till they have seen the work here discussed, as of course a public presentation like this must necessarily pass by many important points. Allow me simply to name a few essentials: 1. The blood must be inspected in the shortest possible space of time after withdrawal. (I have invented a machine to get a drop of blood more quickly.) 2. The objective must be good as to color and definition. Such

an one can be obtained of the Boston Optical Works—Tolles', third class, 1-5 inch, with clinical stand (suggested by me) for $25. This instrument is portable and can be used with any first class objective. (The photos. of yeast, 1-50 inch objective, were taken with this clinical stand.) Ten minutes object teaching suffices to get an idea of this simple instrument. Further, in connection with my associates, I am preparing a clinical microscopic primer for the use of those who are willing to learn. I am glad to say to the older men, who relegate such work to young men, that, strange though it seem, microscopy is a solace of old age. Shrewbury worked with it till his death at about 90 years. A good microscope strengthens the eyes, in place of weakening them.

Finally, I may be mistaken, and past experience may not be realized in the future; but I think that should Dr. Salisbury's and my own experience be repeated (I do not say it will be) by all physicians in the United States, 13,000 lives could be annually saved by the detection of the taints of the pretubercular state alone. I believe it a duty to promulgate these views. I should like to see published the full text, of which but a few pages have been given. I desire that some influential authoritative body appoint a commission of 100 medical men of commanding character. Let them send patients to Dr. Salisbury and myself, or some one else, for one year's treatment on the Salisbury plan, the records to be kept, blood to be photographed and information to be from time to time given to the committee of 100, without discussion or controversy. At the year's end let the authoritative body summon the committee of 100 in council. By its decision after faithful work we would abide. The John Hopkins foundation could furnish such an opportunity. Dr. Salisbury wants such a test. I am willing to conduct it.

Gentlemen, if you can express a favorable opinion on the work of this evening, please to say that you approve of such a test in Baltimore.

CHICAGO, February 17th, 1879.

Original Communications.

ARTICLE II.

NOTES ON SUBINVOLUTION. BY D. T. NELSON, M.D., Professor of Physiology, Chicago Medical College. Read before the Gynæcological Society, February 28, 1879.

As early as 1843 Sir James Simpson called the attention of the profession to this condition of the uterus, under the name of "Morbid Permanence of the State of Puerperal Hypertrophy," and in the same paper described his uterine sound—now so well and favorably known—as an efficient instrument in the diagnosis of this and many other diseases in and around the uterus.

In another paper, read before the Edinburgh Obstetric Society in 1852, he treats of the same subject under the title "Morbid Deficiency and Morbid Excess in the Involution of the Uterus After Delivery." In this paper he uses the term super-involution to designate an excess, and the word subinvolution to indicate a deficiency in the normal involution after delivery.

Since this last paper by Prof. Simpson, subinvolution has been recognized as a form of uterine diseases, but it was to insist upon the importance of its early recognition and appropriate treatment that I proposed this as the topic for discussion this evening.

Prof. Simpson, in the paper referred to, so graphically describes the growth of the pregnant uterus and its involution after delivery, that I cannot do better than read his description. "It is," he says, "a kind of physiological hypertrophy, unequalled, either in regard to its magnitude or its rapidity, in any other organ in the adult human body; for, during the forty weeks of utero-gestation, the uterus enlarges from nearly 3 inches in length

and 1¾ inches in breadth to 12 or 15 inches in length and 9 to 10 inches in breadth. It increases from about 2 ounces in weight to 25 or 30 ounces. The cavity of the uterus before impregnation is less than one cubic inch, while at the full term of pregnancy it is extended to above 400 cubic inches; and the surface of the organ increases from about 5 or 6 square inches to nearly 350 square inches. Before impregnation, the uterine cavity would not hold above a dram or two of fluid; at the end of the ninth month of utero-gestation, its contents usually weigh from 120 to 150 ounces.

The rapidity, however, with which the uterus diminishes in size after delivery is perhaps still more marvellous than the rapidity with which it increases in size after impregnation; for, while it takes forty weeks to attain the dimensions of the fully developed uterus of pregnancy, it requires only from four to eight weeks to decrease to the small size of the same organ in its impregnated condition."

While such is the normal course during involution of the uterus, there are, unfortunately, very many cases in which it does not pursue this natural course, but, for a variety of reasons, after miscarriage especially, and after labor at full term as well, it remains permanently enlarged.

What then are the causes of subinvolution?

In regard to time, they may be arranged in three groups.

1. Those operating previous to the pregnancy.
2. Those occurring at the date of confinement.
3. Those subsequent to delivery.

1. Those operating previous to the pregnancy.

a. Constitutional diseases impairing muscular strength and nervous power, such as tuberculosis, scrofula, syphilis and the like.

b. Local disease, interfering with the normal functions of the pelvic organs, such as pelvic peritonitis and cellulitis, with their subsequent adhesions.

c. Tumors in or near the uterus, such as fibroid and fibro-cystic with extra-uterine fœtation.

d. Enlargement of the uterus, the result of previous miscarriage or pregnant labors.

2. Those occurring at the time of confinement.

a. Over-distention of the uterine walls; by a large fœtus, unusual quantity of liquor amnii, twins and the like.

b. Delay in delivery from the numerous causes of tedious labor.

c. Parturient injuries of the uterus and its appendages, such as rupture of the walls of the womb, laceration of the cervix, vagina and perineum; injuries of the uterus, or its appendages, in the production of a miscarriage; adherent placenta; flooding, producing clots to be retained.

3. Those occurring subsequent to delivery.

a. Puerperal fever, in its various forms of septicæmia, peritonitis, metritis and, possibly, something more than a combination of these in the epidemic form.

b. And then the milder types of fever, such as intermittent fever—the fever attending the disorders of the breasts; phlegmasia alba dolens and the various forms of "slight cold."

c. The absence of nursing and its consequent reflex stimulation of the uterus.

d. Improper exercise before involution is complete, displacing the uterus and so interfering with its circulation and producing a passive congestion.

e. And, at times, insufficient exercise, with bad hygienic influences, producing deficient vital activity without at first well marked disease.

f. Constipation of the bowels, with the accompanying hæmorrhoids, fissures and ulcers of the anus.

g. Too frequent sexual intercourse; the physiological congestion of erection passing into the pathological congestion which accompanies inflammation.

Unfortunately, many of these causes may be combined in the same patient, and thus mutually aid in the certainty of the result—subinvolution.

Consequences of subinvolution.—It is perhaps the most frequent cause of the malpositions of the uterus, such as prolapsus, version and flexion. The uterus being enlarged and, consequently, heavier, its natural supports are not capable of holding it in its normal place in the pelvis, and hence the varieties of prolapsus and version, for the fœtus has gone from the uterus,

and this was the normal excitant in giving tone to the nervous, vascular, and especially the muscular structure of the organs of generation. During pregnancy these organs are, when excited, very like those in a stage of erection, and from their tonic firmness, are not only as easily displaced, but after miscarriage or delivery at full term, if the uterus remains enlarged, this normal tonicity is gone and displacements easily follow.

The cavity of the uterus, too, is large and the walls, including the cervix, soft and flexible, offering favorable conditions for flexions, if the cervix is held firmly while forces from above press downward upon the fundus.

More or less engorgement with blood must necessarily accompany subinvolution; for, while pregnancy existed, all the tissues of the uterus were increased in quantity, the vascular, together with the muscular and nervous, and even the peritoneum; and this physiological congestion offers a favorable nidus for influences capable of exciting inflammation to produce their legitimate results.

The whole thickness of the uterine walls may become inflamed in this way. Metritis, including even the peritoneum and the adjacent areolar tissue; perimetritis; or the mucous membrane alone may be the location of the inflammation; endometritis and the discharges from the placental wound may produce disease of the mucous membrane around, which will extend through the cervix to the vagina, and even to the external organs; cervicitis and vaginitis and the development of the nervous tissue in the uterus renders the transmission easy of the influences that will produce inflammation.

Again, the muscular fibres are undergoing—imperfectly, it is true—a retrograde metamorphosis, offering favorable conditions for inflammation, depressed vitality with active nutrition.

The vascular structures, too, including both the lymphatic and blood vessels are in the best possible condition to absorb morbid products and to assist inflammatory processes.

A moment's attention to the size of the placental wound after delivery at full term, when the uterus measures 8, 10, or even 12 inches in depth, as compared with its size when firmly contracted, and but four or five inches in depth, will convince any

one that the opportunities for septic absorption are greatly increased by imperfect contraction of the uterus, the beginning of subinvolution. Indeed, the dangers do not correspond with the size of the placental wound, but are even greater.

After miscarriage, though the placental wound is not as large and the lymphatic and blood vessels not as highly developed, the remains of placental tissue and blood clots are quite as likely to be present and induce septicæmia. And the muscular structure not being as much developed does not contract as thoroughly.

The unusual development of the nervous structures in the uterus, in subinvolution, explains the reflex symptoms of pelvic disease so constantly complained of by such patients and dated back by them, in their origin, to a miscarriage, or the birth of a child.

This excessive development of the nervous structures of the uterus, connecting with both the sympathetic and spinal systems of nerves, renders reflex transmission easy to any part of the body. Hence the gynæcologist is not surprised to find the symptoms of pelvic disease, especially in subinvolution, reflected to any part of the body.

The following illustrative cases were to me exceedingly suggestive and instructive:

Case I.—Mrs. C. S., married, age 36, Swede, servant, doing general housework. Gave birth to twins 13 years since. No pregnancy before or since. No headache or other symptom of uterine disease, except some backache and the dysuria for which the patient consulted me. At first, not knowing or suspecting the patient had been married or borne children, I prescribed simple diuretics and then other diuretics with the bromides. Not getting the least relief from the dysuria (there was no cystitis), and it had already continued six or eight weeks, I made more careful inquiry into the patient's previous history, and found, as stated above, that she had given birth to twins 13 years previous, but had had no special symptoms of pelvic disease, except during the past two months. Examined uterus July 25th, 1873. Very much enlarged — nearly 12½ centimeters in depth — but little other evidence of disease; a simple case of subinvolution of 13 years standing. A single application of the fluid solution of

carbolic acid to the uterus relieved the dysuria at once, all internal medication being omitted. The relief was so complete that it was difficult to prevail upon the patient to have any further local treatment. But the same application was made at the end of a week, August 9th, the same local application, with the fluid extract of ergot, 2 C. C., three times a day internally, the only internal treatment since local applications were commenced. August 16th, treatment continued; uterus 11½ Cm. The ergot was continued but a short time; for the patient could not be prevailed upon to take it—not appreciating the need of it. Five more applications were made of carbolic acid, making nine in all, at intervals of one or two weeks, and November 13th my record was: uterus, 9 Cm.; patient thinks herself well, and will not come for further treatment.

Case II.—Mrs. E. W. S., American, age 35, music teacher, married 7 years, one miscarriage 4 years since, not pregnant before or since, menses regular, some dysmenorrhœa; bowels loose, especially after menses, 9 or 10 stools a day, about 4 at other times; urine hot and high colored when stools are frequent, not at other times—very anæmic; uterus examined Oct. 8th, 1873. Endometritis, some anteflexion, uterus 9 Cm. The first application to the uterus stopped the diarrhœa without any other treatment, and it never returned. Twelve subsequent applications were made between this time and May 7th, 1874, when, my record says, she seems entirely cured, though still somewhat anæmic. During this time, iron, strychnine and other tonics were given internally, though none during the first six months of treatment. Saw patient in the summer of 1878; no return of diarrhœa, still moderately anæmic.

Treatment of subinvolution.—The treatment is readily suggested by the nature of the cause or causes in each particular case, and without specifying the kind for each class of cases, I will simply emphasize the importance of watching the uterus after delivery at full term, and especially after miscarriage, to determine whether involution is going on normally, and if not to prevent subinvolution by internal, and if need be, local treatment.

All cases of confinement, whether premature or at full term, should be under the care of a competent physician during the

whole period of involution, and this is normally from one to two months, and not one to two weeks, the usual time of attendance. And by weekly examinations, he should determine whether involution is going on normally or not, and if not, he should adopt such measures as will assist it.

The use of the corn or rye ergot immediately after delivery, and during the few days following, if the uterus does not remain firmly contracted, will usually ensure such a result. And by preventing the formation of clots in the uterus, it will, in great measure prevent after pains in multipara, and as there will be no clots to decompose, this source of septicæmia will be avoided.

The use of quinine or some other anti-periodic at this same time, in doses up to, or just short of cinchonism, is likely to prevent the onset of the milder forms of fever, and by circulating in the blood, to act as an antiseptic in preventing the severer forms, and so indirectly, if not directly, facilitate involution.

I will mention but two other remedies; strychnia, and the mineral acids, as likely to aid digestion and promote the normal contraction of the uterus, by their action upon the nervous system.

If, at the end of a month, six weeks, or at the most two months, the depth of the uterus is not less than four inches, local treatment should be commenced and continued with appropriate internal remedies until involution is complete.

No parturient woman should be allowed to resume her full duties, or consider herself fully recovered, until involution is complete. If she does, she risks her future health, and perhaps even her life; and no physician fullfils his duty who does not instruct his patients in these things.

ARTICLE III.

ATROPIA, DUBOISIA, ESERINE, PILOCARPIN AND MUSCARINE.

By Dr. E. L. HOLMES, of Chicago. Read before the Chicago Medical Society, March 17, 1879.

A few facts regarding the last four alkaloids, as used in ophthalmic practice, will not, I trust, be without interest to members of this society.

The action of atropia is so well known to the profession that it is necessary simply to allude to it in this paper to compare its effects with those of the other agents above mentioned; especially as a recent paper, read before this society, discussed those injurious effects of atropine upon the eye, which are not very unfrequently observed by every specialist.

Although the addition of sodæ sulph. or of morph. sulph. to the solution of atropine reduces its tendency to irritate the eye, a new mydriatic has been thought desirable.

Hyoscyamin and extracts of hyoscyamus, as well as those of stramonium, are unreliable.

De Wecker, of Paris, was one of the first to bring to notice a new remedy, duboisia, obtained first (March, 1878) by Petit, of Paris, and soon after by Garrold, of London. This is a product of a small tree growing in Southern Australia.

I have seen but two specimens of the drug; a single grain of duboisia, which is a yellowish resinous substance, and a gram of the neutral sulphate of duboisia, a light brown syrup-like fluid—price, $15. If experience shall demonstrate that this remedy is so valuable as some have predicted, its cost will undoubtedly be decreased. A dollar a grain, however, is a small price for a remedy which alone, in an exceptional case, may be able to save an eye.

According to De Wecker and others, who have used duboisia in cases in which atropine was not tolerated, it possesses the properties of dilating the pupil and paralyzing the accommodation more rapidly than atropine.

I have substituted duboisia for atropine in a case of keratitis, in which prolonged use of the latter had caused great irritation of the conjunctiva and swelling of the lids. These symptoms at once subsided with the use of duboisia, 0.06, aqua, 60.0.

Two valuable remedies have in recent times been added to ophthalmic materia medica—eserine, an active principle of Calaber bean, and pilocarpine, derived from jaborandi.

Both alkaloids possess the property of causing contraction of the pupil and spasm of the ciliary muscles. Patients under its influence see distinctly objects only relatively near. Patients under the influence of atropine see distinctly only objects relatively far.

The influence of eserine and pilocarpine is much less durable than that of atropine.

As far as I am aware, experiments with eserine have been more numerous than those with pilocarpine, although it has been stated that the nitrate of pilocarpine, as also the muriate, which is most in use, is less irritating to the tissues of the eye than eserine.

The solution of eserine loses its strength quite rapidly by decomposition, while that of pilocarpine is stable and, I think, less expensive than that of eserine.

Eserine has been used with benefit in the following conditions: In glaucoma, staphyloma and conical cornea, ulcer of the cornea, with or without hypopion; when the iris has been recently engaged in a penetrating wound or perforating ulcer of the cornea.

It is also stated that it reduces suppuration of the conjunctiva (keratitis), and inflammation of the nasal duct and of the sack. While atropine is supposed to dilate the vessels of the eye, eserine contracts them.

These alkaloids are both contra-indicated when there is a tendency to iritis. They are of almost absolutely no benefit in producing a permanent contraction of the pupil in idiopathic mydriasis.

I need but refer to the fact that while atropine may relieve excessive sweating, pilocarpine induces it.

I have prescribed nitrate of pilocarpine in two cases of keratitis punctata, which is very often an obstinate disease. It not only produced no irritation but gave perfect and speedy relief to the patients.

In a case of staphyloma with an increase of tension, and in a conical cornea with ulceration and conjunctivitis, but with no increase of tension, pilocarpine relieved the active symptoms. Its use in three cases of ulcer of the cornea, with quite severe conjunctivitis, was without benefit. It was applied to the conjunctiva in a one per cent. solution.

Muscarine is one of the active principles of poisonous mushrooms. It has been but little used in treating diseases of the eye. Its singular properties, however, have led physiologists to study its action, not only on the general system, but also on the eye. It is described as a syrup-like alkaloid, soluable in water, without

color, taste or smell. Experiments show that its effects are quite constant in causing spasm of the accommodative apparatus.

Its power to contract the pupil varies in degree somewhat in different individuals.

By suitable union of atropine and muscarine, there may be dilatation of the pupil and spasm of the ciliary muscle in the same eye.

Muscarine in poisonous doses produces an arrest of the heart's action by its effects on the inhibitory nerves of this organ. Atropine, administered internally, or especially hypodermically, tends to neutralize the effects of muscarine on the heart.

It may be of interest to the general practitioner that atropine in doses of 1-100 of a grain, given at suitable intervals, should be administered to patients who have partaken too freely of poisonous mushrooms.

The literature of this subject is confined principally to the *Archives of Ophthalmology—Monatsblaetter f. Augenheilkunde* and the *Journal of Mental and Nervous Diseases*, which give references to the labors of various experimenters in France and Germany.

ARTICLE IV.

THE INCONVENIENCES OF THE PLASTER JACKET, AND HOW TO AVOID THEM. By EDMUND ANDREWS, A.M., M.D.

One evil of the plaster of Paris jacket is the impossibility of removing it for the purpose of bathing. Perspiration often accumulates underneath it, and becomes very offensive and adapted to generate disease, so that it becomes necessary, if the patient's life is to be that of a civilized human being, to construct a new jacket in from two to four weeks.

Another trouble is the impossibility of varying the tightness of the appliance to suit the varying plumpness or thinness of the patient.

A third trouble is the disagreeable suspension of the body by the head and shoulders, the frequent repetition of which awakens

great dread in the minds of some patients. A few practical remarks on the efforts which have been made to overcome these difficulities, will be of great use to many members of the profession.

In order to produce an apparatus that can be removed at pleasure, for bathing and other purposes, and which can be rendered tight or loose at will, Prof. Yandell, of Louisville, has constructed the following apparatus: A thin plaster of Paris jacket is first applied in the ordinary way. This is immediately removed and made use of merely as a mould from which to cast a fac simile in plaster of the patient's body. Around this model he then winds alternate layers of cloth bandage and manilla paper dipped in glue. After this has been laid on to the thickness of 3 or 4 mm., it is allowed to dry into a solid mass. A strip about 5 centimeters wide is then removed from the median line in front, and the whole finished by gluing in a soft lining, and inserting eyelets or hooks for lacing. The elasticity of the material allows this apparatus to be taken from the body at pleasure, by simply springing it open in front. When laced up it has all the rigidity of the plaster jacket, and it can be brought to any degree of tightness.

To avoid the destruction of the apparatus by the strain upon its texture in springing it open, Dr. Chas. Fegers, of McHenry, Ills, has devised a similar jacket, but with an opening both before and behind. The posterior one, about 3 centimeters wide, is closed with cloth, free from glue, which extending around the sides encloses between its layers the more inflexible material, and firmly adheres to them. In front the jacket is closed by lacing strings running through eyelets or hooks, as in Prof. Yandell's jacket. This furnishes a perfectly flexible cloth hinge down the back, which enables the apparatus to be opened and closed more easily than the other. Dr. Fegers has applied his apparatus to a number of cases with excellent results.

Suspension by the head and shoulders is extremely disagreeable, and even painful to some persons. It involves the risk, too, that should the patient present one of those cases of relaxed cervical articulation, which sometimes exist, the strain on the hooks might result in the fearful disaster of a dislocated neck.

Besides, the suspension apparatus is cumbersome and not generally possessed by the physician.

All these inconviences and risks can be avoided, and the best possible position for the patient secured in a very simple manner, and without any apparatus whatever.

In case of a child, if one assistant support the inferior extremities, and the other the head and shoulders, and hold the body in a horizontal position with the face downwards, the center of the spine will fall and tend to straighten the curve, and accomplish the desired extension as perfectly as can be done with the suspension apparatus; the patient being held in this position, the surgeon can apply the plaster bandage in the usual way, and then remove it by dividing in the back or front, and use it for a mould for the construction of a Yandell's or Feger's jacket, as above mentioned.

In case of an adult patient, two tables can be placed end to end with space between them equal to the length of the patient's trunk, pillows being placed beneath his shoulders and hips; he is laid face downward with the trunk extending across the space between the tables; an assistant helping to maintain the position of the patient at either end. The surgeon may now apply the jacket just as before detailed. From a considerable experience, I am prepared to assert that the results obtained by this method of horizontal suspension are in every way equal to those following the perpendicular hanging, while the process itself is simple and far less disagreeable to the patient.

The plan of taking moulds for spinal cases in the prone, horizontal position with the chief support at the hips and shoulders, so as to allow the body between to settle downward, and thus correct the curvature, was introduced into Chicago some ten years ago, by the late Prof. Sherman, as a means of preparing his leather backed corset-supporter. Prof. Sayre afterwards employed a similar position in what he called the "turtle shell" plan; and probably many others have resorted to such an obvious method of fitting aparatus, so that one cannot readily settle the question of priority. Of late years the suspension plan has become fashionable, and is almost exclusively used at the present time.

The difficulties and possible dangers of the perpendicular hanging process appear a little formidable to practitioners who are unaccustomed to it, but the simplicity and comparative comfort of the horizontal suspension is such that any ordinary physician can undertake it without hesitation.

No. 6 16th St., Chicago, March 13, 1879.

PICTURES FROM THE PARISIAN HOSPITAL.—Professor (who has his class in the wards) to patient, "What is your occupation?" Patient (who has pulmonary disease), "Musician, sir." Professor, to class: "There, gentlemen, at last I have the opportunity of demonstrating what I have often told you in the lecture room, that the wear and tear on the respiratory tract caused by the blowing of musical instruments, is a fertile source of just such difficulty as our patient here labors under. (To patient) What instrument do you play, sir?" Patient: "The bass drum!"

MILK-TEST.—A German paper gives a test for watered milk which is simplicity itself. A well polished knitting needle is dipped into a deep vessel of milk and immediately withdrawn in an upright position. If the sample is pure, some of the fluid will hang to the needle; but if even a small proportion of water has been added to the milk, the fluid will not so adhere.—*Med. Record.*

COMA AND ALCOHOL.—Dr. Macewen, of Glasgow, lays down the rule that an insensible person who, being left undisturbed for from ten to thirty minutes, has contracted pupils, which dilate on his being shaken, without any return of consciousness, and then contract again, can be laboring under no other condition than alcoholic coma.

IN A discussion on cremation at a London club, a member is credited with the argument, "We *earn* our living; why should we not *urn* our dead?"

Clinical Reports.

ARTICLE V.

NOTES FROM PRIVATE PRACTICE.

I. Spontaneous Rupture of Aorta.

S. S., female, aged 30, having been treated three days for acute dyspepsia by means of anodynes and laxatives, was on the evening of February 27, suddenly seized with most intense pain in the back; collapse immediately supervened, and death occurred in about one hour.

An autopsy nine hours later revealed a rupture of the abdominal aorta just above its bifurcation, the rent being about two centimeters in length; a large quantity (*fully two litres*) of coagulated blood was found behind the peritoneum; arterial coats discolored and softened from a point just above the origin of the renal arteries to the bifurcation; no aneurismal enlargement—indeed, the caliber of the vessel was less than usual; thoracic and abdominal organs nearly normal.

This case illustrates the necessity of autopsies in many instances; the friends of this patient firmly believed that she died of inflammation of the stomach, until they witnessed the post mortem, notwithstanding my assertion to the contrary.

II. Hypodermic Use of Morphia.

Was called a short time since to treat W. S., male, aged 62, for acute dyspepsia (bilious attack), accompanied by very severe pain. Administered hypodermically, in hypogastric region, morphia sulph. 0.02. Before the syringe was emptied, alarming syncope supervened, and recurred twice, at intervals of ten or

fifteen minutes; stimulants administered freely, artificial respiration and the use of electricity were successful in reviving the patient. Neither narcotism nor coma were in any degree present. Is it possible to attribute the syncope to the effects of the drug? Not over fifteen seconds were occupied in the operation.

H. L. HARRINGTON.

ARTICLE VI.

Cupping in Anthrax.

In the early period of my practice, some 40 years ago, I used the cups in the treatment of local diseases more often than now.

During this period I had to treat a bad case of carbuncle, situated on the back of the neck of an old man. While dressing it one day, it struck me forcibly that cupping would be just the treatment for this case.

Calling for a large goblet and some cotton, I applied it as a cup, after expanding the air by burning cotton in it. The effects were truly wonderful—drawing out from the very interior of the tumor a large amount of pus and corruption, which gave immediate relief. The night following, the old gentleman rested for the first time.

Since this experiment, the first one of which I ever heard or knew, I have relied mainly on the cups for the local treatment of carbuncle.

It fulfills the most important indications in the local treatment of this often troublesome and sometimes dangerous disease. It relieves tension and pain, and limits gangrene of the cellular tissue. It materially shortens the time of cure. With appropriate general treatment, the disease is thus shorn of half its pain duration and danger.

The cups may be applied once or twice a day or even oftener. If resorted to in the early stage, the scalpel or lancet should be used to induce a free flow of blood. Mere dry cupping at this time would increase the flow of blood to the tumor without relief. I would caution against too severe cupping until pus is formed

I more often use a large, blunt rimmed tumbler or goblet than any other kind of cup. The size of the opening of the cup should be, if possible, sufficiently large to cover the base of the tumor. An air-pump attached to the cup, if at hand, would be much more manageable and convenient, but the tumbler and cotton may be used with almost equally good effect, if adroitly done, besides having this advantage, of being always available.

H. HUNT, M.D.

BELOIT, WIS., Feb. 15, 1879.

SOLUTION OF CANTHARIDINE IN CHLOROFORM.—Dr. Coutisson. (*Thése de Paris*, 1878, *Archives de Médecine*, January, 1879.)

Dr. Laboulbène employs a ten per cent. solution. If this solution be applied to the skin, there is seen a quite active congestion at the end of half an hour; sometimes even a quarter of an hour is sufficient for the lifting up of the epidermis, and in five or six hours, sometimes earlier, according to the resistance of the epidermis, vesication is produced. The phlyctenæ continue to increase for six or eight hours, then remain stationary for twenty-four or thirty-six hours, and finally wither.

The sensation is rather one of heat, or even burning, than of very violent pain; indeed this supportable sensation makes cantharidine one of the least painful vesicants. What especially characterizes this irritation is the large quantity of albumen which cantharidine causes to exude. Notable differences might be shown between the characters of this vesiculation and that of other phlyctenæ, seen in disease or produced by other agents.

The irritant action exercised by cantharidine upon the vascular layer of the skin has been utilized by M. Laboulbène for the destruction of maternal nævi. The modifications resulting from the direct action on the deeper portions of the skin are such that the nævus disappears without leaving other traces than a thin cicatrix. It is incontestible that under any other form, cantharidine only acting superficially, would not give the same result.

Society Reports.

ARTICLE VII.

TRANSACTIONS OF THE CHICAGO GYNÆCOLOGICAL SOCIETY. Fourth Meeting, January 31st, 1879. T. D. FITCH, M.D., in the chair.

Dr. E. C. Dudley read a paper on Lacerations of the Cervix Uteri (published in the March number of the JOURNAL AND EXAMINER).

DISCUSSION.

DR. JACKSON: I freely indorse all that has been urged as to the frequency and pathological importance of the lesion under consideration. As an illustration of the grave symptoms it is capable of producing, I may mention the case of a lady who was sent to the Woman's Hospital of the State of Illinois from Iowa some three years ago. The injury was the result of parturition attended by the birth of an unusually large child. She had a slow and imperfect recovery; and, although able to resume her household duties after a few weeks, she soon found herself suffering so greatly that she took to the bed, and was wholly bedridden for more than two years. She was brought on a bed to the hospital.

On examination, I found a bilateral laceration of the uterine cervix extending on each side to the vaginal junction. The separated lips were rolled outwards, and the thickened, everted mucous lining was studded with follicular cysts and bled upon the least pressure. Her general health seemed completely broken down.

After suitable preparation, the operation of restoring the parts was successfully performed. She rapidly regained her health, and, after a few months, returned to her home, where she was a subject of wonder to her friends.

I have operated 19 times for this malady, with this result: One case was followed by a rather severe attack of pelvic cellulitis, but the patient recovered and the operation succeeded; in another case there was hæmorrhage requiring the vaginal tampon; in three cases the parts failed to unite, in two completely, in one union was partial. In two of these a second operation was successful; the third declined further treatment.

My mode of operation differs in some details from that of Emmet, as given by himself and by the essayist. I do not make use of Sims' speculum for exposing the parts, nor of his little hook for steadying them. I place the patient recumbent on a table, and after etherization, she is drawn down so far that the hips project several inches beyond it. She is now put in the lithotomy position, and this retractor, which I have shown you, and which is a simple modification of that devised by Sims for vesico-vaginal fistula, is introduced and the perineum drawn strongly downward and held by one of the assistants. In this position, and by this means, the uterus falls naturally *towards* the vulva, and not *from* it, as it does in the position recommended by Sims.

Again, in order to curtail the movements of the cervix, I am in the habit of passing a stout silk ligature through both lips of the cervix at a point which marks the center of the os. The two ends of this can be held by an assistant quite out of the way of the operator. To steady the lips while they are being pared, and while the needles are being passed, I use this double tenaculum, which has four times as much holding power as Sims' hook. Indeed, I have found this latter instrument quite insufficient to steady the parts while the needles are being passed through the dense walls of the cervix. I pare the surfaces which are to be united liberally, and prefer for the purpose those scissors known as Byford's. I use thick round needles, such as are employed for the closure of vesico-vaginal fistula, and silver wire for the sutures.

Instead of removing the sutures at the end of the week, as recommended by Emmet, I am in the habit of permitting them to remain 9 or 10 days.

Since I have adopted these changes, I have been enabled to

perform the operation with much more facility, and in much shorter time than before.

DR. BYFORD read a letter from Dr. Newman, of Denver, on the subject, which may be found in the present number under the head of correspondence.

DR. SAWYER thought the profession were less likely to err in overlooking the lesion in question than in attributing too great a rôle to the accident as a cause of real discomfort and injury. He instanced a case of a lady whom he had examined recently for the purpose of finding out if she was pregnant, and was surprised to find a marked extropion of the cervix uteri. Upon inquiry, there were absolutely no subjective symptoms of the injury, though three years had elapsed since her last pregnancy.

DR. JONES mentioned the rarity of laceration in his own obstetric practice, and the entire immunity from consequent inconvenience in a recent and pronounced case.

He also called attention to certain questions of diagnosis depending upon the direction in which the long axis of the cervical ellipse might lie, and the doubt whether a true follicular degeneration of the *external* cervix might not sometimes occur, determining a less value to the sign when present.

ARTICLE VIII.

5th Meeting, Feb. 28, 1879.

Dr. Nelson read a paper on Subinvolution of the Uterus, published in the present number of the JOURNAL AND EXAMINER.

DR. JONES (speaking 5th) said that his own views had been anticipated by previous speakers.

He could not agree with Dr. Goodell in regard to post-parturient recumbency, and regarded subinvolution as a common condition in females of the lower ranks, due to early rising, and producing in them, as in the more refined, a variety of uterine ailments.

But here the likeness ceased, and differences appeared in the succedanea, due to the exalted nervous susceptibilities found in

the latter class. This fact suggested remedial means well known to neuropathologists, i. e., the cultivation of *normal* muscular irritability as a cure for *morbid* irritability of the nervous system.

He had had the best results from the hot water douche, properly applied by Emmet's system, and from the use of ergot.

DR. EARLE gave the history of a case of subinvolution with prolapse and considerable hyperplasia, in which the patient could not, from a variety of causes, present herself for continuous or systematic treatment. The womb measured six inches and was prolapsed so that it made its appearance between the labia. The patient's occupation required constant standing, and the pain was very severe. She was fitted with a Hornby's pessary, and did not report to the doctor for nearly one year. The pessary had been worn all this time with complete relief from all pain, and the uterus now measured 3½ inches. The instrument was repaired and re-adjusted, and the patient told to report again if it caused irritation, or if she did not receive the same relief as before. He had not heard from her since, and supposed her cured.

ARTICLE IX.

CHICAGO MEDICAL SOCIETY. Reported by R. Park, M.D. Meeting at the Grand Pacific Hotel, March 3d, 1879. E. Ingals, M.D., in the chair.

The committee appointed at the last meeting to witness the demonstrations by Dr. Ephraim Cutter of specific spores in the blood of phthisical and syphilitic patients made their report. The committee thought that the demonstrations failed to establish Dr. Cutter's theories.

DR. D. W. GRAHAM presented the larynx of a patient who had died in a paroxysm of dyspnœa, with the following history:

Flora L., eight years of age, of English parentage, a decided blonde, of anæmic appearance. She has always had fair general health.

There is evidence of syphilitic taint on the paternal side of the family.

About four years ago I removed a large warty mass from the anus of a younger brother of the patient, which presented all the characteristics of the ordinary venereal wart. With these exceptions, the family history is good.

Three years ago the patient became hoarse, and the power of phonation gradually disappeared, leaving only a faint whisper. There was no dyspnœa at any time, except two paroxysms, of short duration, the one which terminated fatally and one a week previous.

On examining the specimen, we find the mucous membrane of the upper vocal cords, the ventricles, the true vocal cords, and of the inferior cavity as low down as the cricoid cartilage, covered with a warty looking excrescence, best developed, however, on the true vocal cords. The lower left border of the patch is slightly ulcerated and purulent.

After microscopical examination, Dr. I. N. Danforth pronounces the growth papilloma.

This patient has been under my observation at intervals for over a year and a half. The last time I saw her was in November last. I prescribed iodide of potassium and tonics from the first, which were taken very irregularly.

The diagnosis, although suspected, was never made. Repeated efforts and appointments for examination with the laryngoscope were made, but failure of the parents to keep the appointments caused me to lose interest in the case.

With the patient well in hand, and the co-operation of the parents, there is no reason why this case should not have been accurately diagnosticated.

This accomplished, under the same conditions, the case could have been, I think, without doubt successfully treated; and I confess to some degree of self-reproach in the matter for not more fully appreciating the danger of sudden death, and for not more urgently persuading the parents into co-operation.

DR. E. FLETCHER INGALS reported two cases of laryngeal tumors, which he had recently removed.

Case 1.—Fibrous tumor on the left vocal cord; partial evulsion; cure.

Miss D. H., æt. 23, seamstress, applied at the Central Free

Dispensary, on account of hoarseness and occasional pain in swallowing. Upon examination with the laryngoscope, I found the larynx considerably congested, the vocal cords swollen and

congested, and a small, slightly pedunculated tumor growing from the under surface of the left vocal cord near its anterior extremity. The application of astringent powders soon removed the swelling of the vocal cord, and seemed to cause slight diminution in the size of the tumor. The larynx was very sensitive and intolerant of instruments.

In October, 1877, the hoarseness had existed ten or eleven months; all acute inflammatory symptoms had subsided but the tumor still remained. After frequent attempts to seize the tumor with McKenzie's tube forceps, with blades opening antero-posteriorly, and failure to pass the blades between the vocal cords on account of the nearness of the tumor to the anterior commissure, I determined to seize that portion of the tumor (about two-thirds) which rose above the vocal cords. Turning the blades so that they opened laterally, I seized the tumor, crushing it firmly, and bringing away a portion of its mucous covering. Three days later the tumor had disappeared, but there was a prominence at its original seat, due to congestion and swelling of the cord. Ten days later the cord had resumed its normal appearance, and the voice was completely restored.

Case 2.—Fibro-cellular tumor on the right vocal cord, with partial aphonia; evulsion; cure.

Mrs. S., æt., 20. Formerly a teacher and elocutionist. Has been troubled for fifteen month with hoarseness, which seemed to have its origin in a common cold. Complained also of occasional dull pains in the larynx. The patient was treated for several months with gargles, inhalations, etc., and latterly has been treated, by a prominent homœopathic physician of this city, for

chronic laryngitis, with electricity, the poles being applied externally over the larynx.

Upon examination, I found a small tumor growing from the under surface of the right vocal cord, and situated about three millimeters from its anterior extremity. The tumor, as repre-

sented in the cut measured about six millimeters at its base and three at its apex.

During ordinary respiration the epiglottis hung so far backward that it was impossible to see more than a small portion of the posterior part of the glottis, but while the patient phonated a high pitched *a*, the epiglottis was raised and about half of the tumor projected above the vocal cord. In this case, also, I found it impossible to grasp the tumor with the blade of the forceps opening antero-posteriorly.

The position of the epiglottis rendered it impossible to pass the forceps into the larynx during ordinary respiration, and even during deep respirations the end of the forceps could not be carried far enough forward to reach the tumor without firm pressure by the instrument on the epiglottis, which would produce immediate closure of the larynx.

Accordingly, I was obliged to grasp the tumor during phonation, by which means I succeeded in removing the greater portion of it. The tumor when removed was much reduced in size, its semi-fluid contents having been forced out by the forceps.

Five days after the operation there was no trace of the tumor, though the cord was somewhat congested and swollen. Six days later nearly all congestion had disappeared, and the voice seemed normal, though the patient's mother thought it still a trifle husky. A few days later the patient assured me that the voice was perfect.

DR. F. H. DAVIS presented to the society the results of his

observation and study in the adpatation of local treatment to pulmonary diseases.

The chief obstacle encountered was in the lack of tolerance of the deeper air passages to local medication. The admixture of any medicament, either in gaseous, liquid or solid form with the inspired air, was immediately resented by the lungs in an involuntary, spasmodic cough, or attempt at rejection of the irritant material.

For this reason the various gases and vapor, or spray treatments, which had been from time to time put forward, had invariably disappointed the high hopes theoretically entertained for them, and had mostly fallen into disuse.

The author believes however, that in a certain limited range of pulmonary diseases a properly adopted local treatment would insure results not obtainable by any other form of treatment.

In acute inflammations of the air passages, moist or steam inhalations were considered to be contra-indicated on account of their tendency to increase the sub-mucous infiltration and œdematous swelling. In chronic, suppurative bronchitis, the inhalation of air charged with steam and carbolic acid vapor would readily check the excessive expectoration,—the addition of an anodyne, as camph. tincture of opium, would further lessen the irritative cough. The same result could, however, be perhaps as certainly and as speedily reached by the ordinary internal treatment.

The class of cases where local inhalations were chiefly of value, were those presenting the symptoms of incipient tuberculosis, or those approaching the second or suppurative stage, and also in cases of pueumonic inflammation tending, on account of the lack of recuperative power in the system, to take on a degenerative suppurative action to end in inflammatory phthisis.

In all of these cases it was of the utmost importance to conserve all the power and strength of the digestive organs for the building up and support of the system by food, nutritive tonics, etc., and the less these organs were taxed with ordinary medicines—anodynes, expectorants and the usual cough mixtures, the better for the patient.

The inhalation of air charged with warm steam and the vapor

of paregoric with the addition, in incipient tuberculosis, of some one of the balsamic preparations, as the oil of Scotch pine or the oil of English juniper, was recommended. If suppurative action had commenced, carbolic acid was substituted for the balsam.

The following formulas were given by the author.

℞ Oil Scotch pine ..... 5 | 0
Tr. opii. camph..... ..... 100 | 0

Sig.—1 teaspoonful to be added to ½ pint of boiling water, and the vapor inhaled for five minutes two or three times a day or oftener.

℞ Acid. carbolic. cryst..... 2 | 0
Tr. opii. camph..... 100 | 0

Sig.—Use the same as above

A tin inhaler which was exhibited was claimed to possess the following advantages: Large tubes (⅝ inch) which permitted free inhalation without suction; valves so arranged as to enable the patient to expire slowly and against a certain amount of pressure which exerted an expansive effect upon the lungs and held the inhaled vapor longer in contact with the air passages. Lastly and chiefly, cheapness—the inhalers being sold to patients at seventy-five cents each. These inhalers are on sale by D. R. Dyche & Co., State and Randolph Sts., Chicago.

These inhalers on first being used created some reflex irritative cough, but this was quickly subdued by the anodyne effect of the opiate, and combined with the stimulant effect of the balsams or the disinfecting influence of the carbolic acid they would be found to accomplish most gratifying and satisfactory results in a class of cases otherwise unmanageable.

ARTICLE X.

CHICAGO MEDICAL SOCIETY. Reported by R. PARK, M.D.
Meeting, March 17th. Dr. Ingals in the chair.

Prof. E. L. Holmes read a paper on "Atropine, Duboisine, Eserine, Pilocarpine and Muscarine," which will be found under the original communications of this number.

In the discussion which followed, Dr. F. C. Hotz remarked that since the reading of his paper on anomalous effects of atropine, he had observed several cases in which the intra-ocular tension was greatly diminished by the prolonged use of atropine. In one case the eye was exceedingly sensitive to atropine, but tolerated the drug after morphine was added to it. It was a case of acute iritis of the right eye of a woman, aged thirty-one years, who consulted the doctor in the middle of December. The inflammation had lasted three weeks, and consequently there were several posterior synechiæ; the iris was much discolored, a very intense peri-corneal injection, and great pain in and about the eye; V=fingers across the room, tension normal. After one week the patient reported that the two preceding days the atropine had caused her much pain; and the eye which had been improving at first, was again more inflamed, the pupil more contracted. Morphine was added to the solution of atropine, and under this medicine the eye rapidly recovered, so that a few days after New Year's it was quite well and had perfect sight. But, at the end of January, patient returned with the eye worse than ever. It was very red and painful, but the pupil was of medium size, and regular. The sight, however, was again reduced to the counting of fingers across the room, and the tension of the globe was exceedingly diminished, and it was as soft as a partially atrophied eyeball. Patient had been using atropine all through January. It was discontinued at once; a mere placebo was given (an ointment with vaseline to rub in the forehead) and after one week the eye was well and its sight perfectly restored.

In regard to pilocarpine and eserine, Dr. H. thought that pilocarpine would probably be the myotic of the future, because it is more stable in solution than eserine; furthermore, it produces less irritation, and probably it will be less expensive. "Both remedies are still on trial, and nothing definite can be said about the indications for their use. But if some writers recommend them in cases of hypopyon, it is difficult to harmonize their advice with the facts that all observers consider pilocarpine or eserine strictly contra-indicated in affections of the iris, and that in hypopyon the iris is almost always implicated."

Pilocarpine and eserine are considered very efficient in reduc-

ing the tension of the eye-ball. But, in the following case, pilocarpine seemed to have an opposite effect. A sailor came to the Illinois Eye and Ear Infirmary a few weeks ago with a large central ulcer of the right cornea. It came on three months ago, after an eruption of herpes zoster frontalis and nasalis. Atropine has been used all the time; pupil was moderately dilated, eye-ball very red, painful and extremely soft. Pilocarpine was used in lieu of atropine with a very good result; the pain has left the eye, the inflammatory symptoms have pretty nearly disappeared, and the tension of the globe has decidedly improved, though it is still a little under the normal standard.

Dr. Lyman Ware wanted to ask whether the use of pilocarpine would do away with the necessity for iridectomy in cases of glaucoma? He had been treating a sub-acute case of this disease with it, but sufficient length of time had not elapsed to prove its efficacy.

Dr. Holmes closed the discussion by saying that the only glaucomatous case in which he had used the drug was one complicated by staphylomatous cornea, and, although it seemed to work well, he was not yet willing to commit himself on this point. In acute cases he thought that very few would be willing to wait long enough to test it, fearing disastrous result from the delay.

He apprehended danger in the future from the use of these drugs in unskillful hands, since very few were able to diagnose iritis in its earliest incipiency, and if an inflamed iris should be thus contracted down by their use, adhesions might form and irreparable injury be the result.

Dr. R. G. Bogue then reported a case of intra-laryngeal tumor in the left aryteno-epiglottic fold occluding the glottic opening, the case being complicated by a chronic pharyngitis and ulcerated epiglottis. After the use of local astringents and general tonics, he performed tracheotomy, leaving the tube *in situ* some nine months. During this time and under the internal use of potassic bromide, the tumor became smaller, and now, after three years, only a scar remains to mark its site. In discussing its nature he said that if it were considered of a specific character, of which there were no constitutional evidences, it would indicate that the bromide was as efficacious as the iodide was reputed to be.

Dr. Bogue also reported the case of a woman aged 24 years, in the puerperal state, who was suddenly seized with acute pain in the calf of one leg. After a few days this was followed by discoloration of the foot, and this by spontaneous gangrene. In spite of all treatment this extended, and finally, a line of demarcation having formed, he amputated through the knee joint successfully. Subsequent dissection of the amputated portion revealed extensive occlusion of the venous channels from a phlegmasia of the *deep* veins, which was a very rare occurence. The patient's recovery was delayed by a mild phlegmasia alba dolens of the other leg. He exhibited sections of the occluded popliteal veins, of which there were two.

Dr. D. W. Graham exhibited a femur, removed from a subject supplied for his lecture course, which gave evidence of an oblique fracture having at some time been suffered involving the upper third of the shaft; the upper fragment having been tilted forwards and outwards. The bone, on comparison with its fellow showed an inch of shortening, one-third of which was between the two trochanters, thus indicating that the lesser trochanter formed a part of the lower fragment. The peculiar obliquity and locality of the fracture made the specimen an interesting and unique one.

Dr. Roswell Park exhibited a specimen, also removed from a dissecting room subject, of an elbow joint which had been the seat of some injury which he conceived to have been of the following nature: An oblique fracture of the upper one-fourth of the shaft of the ulna, with dislocation forwards of the head of the radius. The result of the injury was deformity of the ulna near its olecranon process from gliding and rotation of the fragments, and a new socket for the head of the radius on the external condyle of the humerus, an inch above its proper site on the ulna, where it had formed strong ligamentous attachments. The head of the bone was much larger than normal, evidently from irritation, and those parts of the condyle and of the radial head which were in contact, were cburnated and denuded. In the outer part of the orbicular ligament was what seemed to be a calcified fragment of periosteum, which had probably been loosened at the time of the injury.

After inspection, all those present agreed in accepting the above explanation as best accounting for the appearances of the specimen.

The society then endorsed a resolution passed by the West Chicago Society recommending the State Board of Health to secure legislation providing for compensation of persons who make returns of births and deaths, as now required by law; after which it adjourned.

RESEARCHES ON THE TREE WHICH PRODUCES "GOA" POWDER.—Dr. Da Silva Lima. "The tree which yields the Araroba or Goa powder is known in the districts where this industry flourishes under the name *Angelim amargosa* ('bitter angelim'). The word *angelim* is not now understood. The tree belongs to the nat. ord. Leguminosæ, and the appellation 'bitter' arises from the fact that the ligneous portion resembles good cinchona in flavor and bitterness. It is found in company with another tree belonging probably to the same genus, namely, *Andira anthelmintica* Benth., which has anthelmintic properties. There is also an *angelim doce* ('sweet angelim,' *Andira vermifuga*) and an *Angelim pedra* (*Andira spectabilis*)."

The araroba tree occurs abundantly in the forests of Camamu, Igrapiuna, Santarem, Taperoa and Valença, of the province of Bahia. It attains a very large size, one to two meters in diameter, and twenty to thirty meters in height.

The Goa powder is contained in more or less narrow fissures and chinks in the ligneous portion, running mostly through the whole length of the trunk, and becoming narrower above. It is customary to cut down the tree, to saw it into sections, and then to split the blocks open in the direction of the fissures, when the powder is readily obtained. There is scarcely any doubt that the original tree is either an *Andira* or a *Cæsalpinia.—L'Union Pharmaceutique.*

Foreign Correspondence.

ARTICLE XI.

MISCELLANEOUS SURGICAL NOTES FROM BERLIN.

As a place for the study of surgery, and the witnessing of surgical operations, Berlin is undoubtedly the very best point in all Europe, and hence probably the best in the world.

Other cities have as much or more surgical material, but it is generally, as here in London, so divided between different hospitals and different operators, that it is impossible for one to witness it all, or to be benefited by it, to such a degree as at "Langenbeck's Clinic" in the German capital. For from two to four hours each day, for six days in the week, you can witness here every variety of surgical operation, from the opening of an abcess to those the most grave known to the domain of surgery.

To-day Prof. Langenbeck is to surgery in Prussia, what no other man is to this branch of medicine in any other country.

Although he has introduced and is really the father of many of the great operations that he performs, he is a man without a hobby, and never speaks of any procedure as being an invention of his own. While Péan, Gosselin and Verneuil seldom quote anything but French authority, and Bryant, Lister and Paget are partial to British authors, Langenbeck is as cosmopolitan in the sources from which he draws his knowledge of the branch that he teaches, as the universe itself.

As a didactic teacher, he never would have been a success in America, where a certain eloquence of delivery is considered so essential in the lecture-room. In lecturing, he often hesitates, and will sometimes stop for several seconds between the phrases of his sentences. In treating of any surgical procedure of impor-

tance, he first gives the views and teachings of others, and then compares the same with his own experience; which, taking the whole field of surgery together, is probably the most varied and extensive of any man's now living. While Péan, of Paris, does only the most important part of his surgery, leaving the closing and dressing of wounds to his assistants, Langenbeck attends to every detail himself, ties every artery and puts in every suture.

With the use of the antiseptic spray, he says that *time* has ceased to be an essential factor in the performance of most surgical operations.

Hence he does his work in the most deliberate manner; without dash and without bustle, he executes his task with that steady and matter-of-fact composure with which a mechanic would use his tools in the pursuit of a trade to which he had devoted his entire life. Only in a single instance do I remember to have seen him show the least agitation, even in the greatest emergency.

A young man came to the "Clinic" who had a large fibroid growth situated in and attached to the superior and posterior aspect of the nares. Prof. Langenbeck first thought, on examination of the case, that it would be necessary to resect a portion of the superior maxillary bone in order to reach the mass and remove it. But finding, on further examination, that he could reach it by way of the pharynx, he laid the patient on his back on the operating table, and seizing the growth with a strong pair of forceps, with great force he twisted it off. So immense was the hæmorrhage that followed the operation, that the patient lost one liter of blood in less time than that in which the reader can read two lines across the pages of this journal. The old man stood amazed and cried out, "Good Lord, what shall I do? I think I shall have to ligate the carotids;" but with a presence of mind that did not even now desert him, he placed both thumbs on these vessels, and while he made firm pressure he had the man raised to the upright position, and by continuing the pressure the bleeding soon ceased. The doctor said that his first impression was, on seeing this great flow of blood, that the tumor was attached to the internal carotid, and that in tearing it away he had torn through the coats of this vessel.

The patient made a slow but perfect recovery.

Report says that this year will end the labors of this great man as a teacher, as he proposes at the end of the next Semester to resign his Professorship in the University of Berlin.

Prof. Volkmann of Halle, an eloquent teacher, and a man in the prime of life, is likely to take his place; while Dr. Schede, Surgical Director of the City Hospital of Berlin, and a man, by the way, who excels Lister himself in carrying out the principles of antiseptic surgery, will go as Professor of Surgery to Halle.

To select from the immense amount of material that I have had access to in this clinic, such as would be of most interest to the reader, is a task of no little perplexity; but I shall follow the same rule in my selections that has heretofore governed me, and that is, to give those cases the preference that are most likely to be met with and require management in ordinary practice.

AMPUTATION OF THE FEMUR.

A man aged 36 years, suffering from a malignant disease of the lower end of the femur, was brought into the ampitheater, and while the assstants were administering chloroform to the patient, and making other necessary arrangements for the amputation, Prof. Langenbeck made the following general remarks on the subject:

"Where it can be done, I make *side* flaps, instead of antero-posterior ones, as is generally done. I do this, first, because a better drainage can be effected after the operation, and second, because I believe any resulting cicatrix is more likely to be situated at a point that will render it less liable to be irritated by the friction connected with the movements of the stump.

"Again, I make my flaps *entirely* of skin and its immediately adjoining tissues. I want no muscular tissue overlapping the end of the bone. If you have a long muscular flap, it is sure to either slough away or gradually become absorbed. If it should slough, it immediately complicates your case by adding to the dangers from septicæmia."

When he had made his skin flaps he then made a section of the periosteum, extending half way around the shaft of the bone, and six centimeters in length. Having peeled this carefully back, he

had a perfect covering for the end of the bone, after the latter was sawn off. He says, that since he has adopted this mode of procedure, he has never had a single case of secondary disease, such as caries or necrosis, following his amputations. When he had sawn off the femur, and brought the skin over the end of the stump, lo! his flaps were so short that they would not come together without considerable tension. He remarked: "As you see, gentlemen, the end of my bone is either too long, or my flaps are too short, and, as I cannot lengthen the latter, I shall have to shorten the former;" and without another word of explanation he proceeded to saw off another six centimeters from the end of his stump.

Before he closed the wound, he applied eighteen ligatures, all of which, except the one to the main branch of the femoral artery, were of carbolized catgut. These ligatures of course were all cut short and left to be absorbed; and I have never seen him leave the long ends of ligatures out of a wound with a view to their future removal. A drainage tube was introduced into the inferior and superior border of the stump, and the whole was sewed together in the most painstaking manner. The stump was dressed with Lister's antiseptic dressing, the whole operation being done under the spray. The operation lasted one hour and ten minutes. In contrast with this time, I have seen Prof. James R. Wood, of New York, do this operation complete in five minutes, making his flaps and sawing off the bone in forty-five seconds.

The result of this operation was most satisfactory indeed. The whole wound healed by first intention, and the patient never had a temperature above 37.5, and never suffered any considerable amount of pain.

In speaking of the rapid recovery of this case, Prof. Langenbeck said that he attributed it mainly to the painstaking manner in which he had arrested *every vestige* of hæmorrhage before closing the wound. He believed that in the vast majority of cases where a constitutional reaction followed surgical operations of this kind, and which we had formerly been taught to look upon as having its origin in an inflammatory reaction, was in fact of a septic character, and that a decomposed blood clot situated at the

extremities of open blood vessels, was the very best possible condition for generating such a process.

PROLAPSUS ANI.

A boy aged six years was brought into the clinic, suffering from this affection. It had troubled him for two years, but until within the last month the gut only came down at the time of the stools. For the last four weeks it had been down constantly, and neither the mother or her family physician had been able to replace it. In connection with the case Prof. Langenbeck said: "In this disease I have been able to cure *every case* in which I have instituted the treatment I shall adopt in this one, where the the patient has been above three years of age.

"Why I have not been equally successful in those of more tender years, I cannot tell, but am disposed to attribute my failures to the fact of younger children being less manageable, and their pressing down efforts when they cry."

His treatment consists in the injection of ergotine into the cellular tissue beside the rectum. He passes the hypodermic syringe parallel with the gut to the depth of about three centimeters, and injects about 20 minims of the solution into each point, usually making the injection at two or three places around the sphincter.

As the mucous membrane of the prolapsed gut in this case was very relaxed and superabundant, he made three parallel incisions through it, about four centimeters in length, with the thermocautery, with a view of producing a cicatricial growth that would contract the parts when it healed. This last procedure he did not consider essential to the treatment, but it would probably hasten the cure. The gut was now replaced, and the boy put to bed, and the cure was complete, as the bowel never again came down.

I have been most highly pleased to witness Prof. Langenbeck's operations upon the uterus, and in listening to his lectures upon this subject, not only on account of his wide range of personal experience, but also on account of the fact that I look upon him as a man who is the least influenced by any special hobby of any man that I have ever seen operate on that organ.

UTERINE POLYPI AND FIBROIDS.

I saw him operate on a woman for the removal of a uterine fibroid polypus that had descended into the vagina and filled this organ so completely that the evacuation of both the rectum and bladder was completely obstructed.

The growth was so large that he was unable to pass the écraseur over the entire mass to its cervical attachment, and hence he had to pass the chain of the instrument around its lower segment, and remove it in three separate portions.

The last was so large that he had to extract it with a pair of obstetrical forceps. He said: "Whether these growths be solid, soft or cystic, there are only three modes of removing them that I recognize as proper to adopt, and these are, the knife or scissors, the écraseur and the galvano-cautery. When they are attached high up in the uterus, I do not like the galvano-cautery, for the reason that you can never be really certain what you are burning, and you may destroy tissues that will lead to disastrous consequences."

The use of the ligature for the removal of these foreign bodies he especially condemned. In the early years of his professional life, he had seen two patients die of septicæmia following the removal of a uterine polypus in this manner.

We must remember, in all our operations upon the uterus, that although we have to do with an organ that will tolerate a good deal of mechanical violence, that we have also to do with a mucous surface that will the most rapidly absorb effete matter of any tissue in the entire body; and that when a polypus is ligated it soon becomes a putrid mass, from which the whole economy may become rapidly contaminated. The twisting off of polypi he also considers a bad practice, and has seen at least one case where the extensive laceration of the mucous surface of the womb attending the operation resulted in a metritis from which the patient died.

Prof. Schröder had in his wards at the Charité this winter some interesting cases to illustrate his management of different forms of uterine fibroids. In our treatment of these cases, he says, we should remember one fundamental rule, which is, that in the history of every such case there usually comes a time when

the morbid growth will cease to increase in size, begin perhaps to undergo a retrograde metamorphosis, and become in time entirely innoxious as far as the well-being of our patient is concerned. Directly opposed to this are the facts connected with the history of most cases of ovarian cysts. Their tendency is ever to increase in size, and their removal will sooner or later be imperatively demanded. Keeping these facts in view, we seize upon the most appropriate time for our operative interference. In the management of a case of uterine fibroid, he says, investigate your case accurately as to this fact. Is its attachment situated upon the lining membrane of the *body* of the womb, or upon the *cervix* uteri. If it have its origin from the body of the womb, you are to consider it as a *noli me tangere*, unless it be the direct cause of symptoms that are likely to prove dangerous to the life of the woman. On the other hand, if it spring from the cervix uteri, you may operate on it in almost any way with comparative safety.

To arrest the hæmorrhages that accompany these cases, he swabs out the inner surface of the womb with either the tincture of iodine or a solution of one of the astringent salts of iron.

A question in which I have been greatly interested, and upon which I have interviewed everybody, is the value of the hypodermic injection of ergotine in the treatment of uterine fibroids.

Prof. Schröder says that he has often seen cases greatly benefited by this treatment, but has never seen a case entirely cured by it. By its use the hæmorrhage will often cease, and the tumor become greatly lessened in size. To test the remedy he says you must use at least one hundred injections. He makes them into the cellular tissue of the abdominal walls, and repeats them as often as every alternate day. As so protracted a use of an agent that is often very painful, taxes to the utmost the patience of both physician and patient, few carry it out thoroughly.

Braun, of Vienna, makes these injections into the outer aspect of the thigh, where they are better borne. He uses also Bourbellon's ergotine, and none other, as he says you never have an abscess follow its use. Its name, I believe, is derived from a Swiss chemist who manufactures it.

Dr. Routh, of Dorset House Hospital for Women and Children, in London, is the greatest enthusiast of any I have met in Europe as regards the efficacy of his treatment of intra-uterine fibroids. His plan is to first puncture the tumor by passing a sharp pointed instrument into it about the size of a number six English catheter. The depth to which he makes this puncture will depend upon the size of the tumor, but will usually be to about one-half of the thickness of the growth. After making his puncture, he introduces into the hole thus made a wire of nearly the same size, heated to a red heat. He claims that in this way you can excite an inflammatory change in the body of the fibroid that will lead to its absorption, and that too without any of the dangers of a septic process following the procedure, which would be likely to occur if you attempted to accomplish the same object in any other way. He says that he has never failed to benefit a case that he has treated in this manner.

He was surprised when I told him that I had seen Prof. Péan, of Paris, carry out the same idea in the management of some cases at the St. Louis.

AMPUTATION OF THE CERVIX UTERI.

Of the various modes of doing this operation, Prof. Langenbeck prefers the knife or the scissors. The écraseur, he says, should *never* be used for this purpose. He relates a case that occured in his clinic, when Prof. Bilroth was his assistant, in which, although he applied the instrument with great care, and kept his finger on the chain during the whole operation, Prof. B. tightening the screw, a portion of the bladder was included in the incision, and the patient died two days later of peritonitis. The objection that Prof. Langenbeck has to the galvano-cautery in this operation is that you can never be positively sure as to *just* how much tissue you are removing.

On the other hand, since I have been in London I have seen Prof. Barnes amputate the cervix twice with the écraseur. He used the instrument without a speculum, being guided wholly by the index finger of each hand, which he kept in contact with the chain.

After the cervix is removed, he applies the thermo-cautery, to

arrest any hæmorrhage that may exist. This, he tells me, is his *uniform* mode of doing this operation, and that he is perfectly satisfied with his results. Prof. Barnes brought out a patient and laid her on the operating table, telling me as he did so, that he was going to show me the American operation (Emmet's).

But on examining the cervix, and seeing it very red and congested, he concluded that he would wait a few days, until the congestion in the parts subsided. In fact, he feared the hæmorrhage that would follow. I could but contrast his timidity with the confidence with which some German operators would have attacked these parts with the knife, without the least fear or hesitation.

I have seen the amputation of the cervix done with scalpel about forty times during my stay in Berlin, and not in a single instance have I seen any serious trouble in arresting the bleeding. Dr. A. Martin, of this city, read a paper last year before the gynæcological section of the German Medical Society, on "The Therapeutics of Chronic Metritis," in which, after going on to state that as all medications, both local and constitutional, had proved of no avail in the management of this disease, he had been induced to resort to an operative procedure for its cure, which operation consisted in an amputation of the cervix uteri.

At that date (August last) he had done the operation 109 times. Of these patients, 72 suffered from a simple chronic metritis, one-half of which number he had had under observation and treatment for many months without the least improvement in their condition. Twenty-six were performed for a cancerous condition of the cervix, and eight for a local hypertrophia of one or both lips of the neck of the womb. Of these cases, only two died as a direct result of the operation. One of these was very anæmic from loss of blood before the operation, and died of septicæmia soon after. The other proved fatal from the supervention of typhoid fever.

His mode of doing this operation is to cut away a portion somewhat funnel-shaped, the base below and the apex above, of from 3 to 5 centimeters in length, depending upon the length of the uterus, as measured by the sound before he operates.

I have followed Dr. Martin carefully for nearly four months,

and have seen him and assisted him at this operation more than thirty times; and while I am perfectly sure that no écraseur nor galvano-cautery can do this operation so well as does his knife, I am sorry to be compelled to believe that, like some other of our noted gynæcologists, he is bent on doing "*his*" operation as often as possible, and so submits many a poor woman to this treatment, who might be relieved by a more simple procedure.

Unfortunately, like many another celebrated operator, he is inclined, I fear, to keep in the background as much as possible the accidents that follow his treatment.

I saw a woman in the service of another gynæcologist of Berlin, operated on for complete occlusion of the os uteri and hæmatometra, that followed an amputation of the cervix by Dr. Martin.

When I related the case to Dr. M., he said that this patient was one of two who had had secondary hæmorrhage following the operation, and he attributed this bad result in her case to the extra stitches that he had had to put in, in order to stop the bleeding, as well as her having left his service and passed out from under his observation sooner than she should have done. Prof. Schröder's mode of amputating the cervix, and which Prof. Langenbeck recommends, is, in my mind, at once the most simple and easy of execution of any of the numerous modes of doing this operation that I have seen tried. Dr. Martin, however, objects to it because the resulting stump is somewhat flat, while when done after his plan (Dr. Martin's) the stump is conical in shape. Prof. Schröder's reply to this is, that nature has to re-shape the parts after any cutting procedure of this kind, and that in the end his operation leaves as natural a cervix as any other. To do this operation Prof. Schröder places his patient on her back, her thighs flexed upon the abdomen and the legs upon the thighs. (I have never seen a German operator place a woman in Sims' position).

A Simon's speculum is next introduced, and the perineum pressed well down. A Hegar's irrigator containing a 5 per cent. solution of carbolic acid is now made to throw a constant stream of this fluid upon the cervix uteri during the entire operation. In fact, Prof. Schröder claims to make this operation strictly

antiseptically, substituting the fluid carbolized solution for the spray. A pair of scissors are now introduced into the os uteri, and the os incised as high up as the vaginal insertion on each side. The cervix is thus divided into two flaps, and while an assistant pulls down upon and steadies the womb by means of a pair of forceps made fast to one flap, the surgeon seizes the other and amputates it rapidly with the knife, cutting, of course, from below upward, so that you have left after the amputation a somewhat long flap-shaped mucous membrane to cover the stump.

By means of a curved needle, armed with a heavy silk ligature, two sutures are now passed from the vaginal mucous surface of the stump into the os. These sutures are each placed 1 centimeter from the median line at their point of entry into the vaginal walls. They are now tied tightly, and serve to render the os uteri patulous, as well as to pull down and hold the womb firmly, while the other lip is being cut away in the same manner. From three to four stitches are next applied on each side of these central ones, and the operation is completed. The vagina is now tamponed well with salicylated cotton, which seals up the wound and makes the whole procedure antiseptic.

With the uterus thus firmly held, and with a needle curved to a semi-circle and armed with a silk thread, there is but little difficulty in passing a suture through the muscular walls of the uterine stump in such a manner that when it is tightly tied it will include any bleeding vessel and effectually arrest any hæmorrhage.

German operators do not use the silver wire for sutures, either for this operation or Emmet's, as they claim that the silk answers every purpose, and is much easier to apply and remove.

Prof. Langenbeck lays down one very emphatic rule as to the use of styptics to arrest hæmorrhage where operations have been done in the vagina, and where the probabilities are that the peritoneum has been encroached upon. *Never*, he says, use preparations of *iron* for this purpose. He relates several cases where he used a solution of iron, and after his patients died of peritonitis he found that the walls of the peritoneum had sloughed away from the effect of his styptic. He believes that even a moder-

ately strong solution of iron will cause a necrosis of any serous membrane to which it is applied.

Prof. Freund, late of Breslau, but now called to Strasburg to fill the place of Prof. Gusserow, appointed as Professor of Midwifery in the University of Berlin, spent a month in the latter city this winter. As the reader perhaps knows, Prof. Freund is the father of the revised method of extirpation of the entire uterus through the abdominal walls.

I saw him operate on a case for Dr. Schröder just before I left Berlin. The patient was alive four days after the operation, but her recovery was considered doubtful. I saw him begin another operation of the same kind for Dr. Martin, but after making his abdominal incision, he found the pelvic glands so invaded by cancerous infiltration that he would not attempt the removal of the uterus.

He closed up the wound, and Dr. Martin then performed his amputation of the cervix uteri as a palliatory expedient. This poor woman had a good deal of constitutional disturbance, but was convalescing the last time I saw her, ten days after the operation.

Prof. Freund has done this operation of the total extirpation of the womb 12 times and has had 7 recoveries, while in Dr. West's tabulated 25 cases there occurred 23 deaths.

The enucleation of the womb entire through the vaginal walls, of which a lately published case is reported by Prof. Lane (I believe) of San Francisco, Prof. Langenbeck considers an anatomical *impossibility*.

He says, that while you may with considerable facility separate the *cervical* portion of the womb from its attachment, that when you reach the *body* of that organ, you cannot separate its muscular tissues from its peritoneal coating without the greatest difficulty, even when you have the uterus removed from the body and dissect with the greatest care, and as an operative procedure upon the living body he does not think its accomplishment possible.

TRACHEOTOMY.

A child six years old was brought into Prof. Langenbeck's clinic, and being placed upon the table. He said:

"Gentlemen, you would scarcely imagine on looking at this little boy and seeing how little his respiration is embarrassed, that I am about to open his trachea."

The patient was suffering from dipththeria, and had twenty-four hours previously developed a croupy cough. Prof. L. laid it down as a rule, to which there should be no exception, that in the management of these cases that you should operate before signs of extreme dyspnœa and blood poisoning come on. Waiting will do no good, for with an almost absolute certainty tracheotomy will be necessary, and the longer you wait the less are your chances of success. The operation itself is not dangerous unless done when the patient is in extremis. Since 1870 he has done this operation 700 times in this clinic. In some years he has saved as high as 40 per cent. of his cases operated on, and in others only 10 per cent.

He was not able to explain why there should be this great difference in the mortality of his cases in different years; but one fact he did know, and that was that since he had given out word to the physicians of Berlin that they should send their diphtheritic patients earlier for this operation, that his success had been much better.

In the City hospital of Berlin diphtheritic patients are kept in a ward adjoining that devoted to the chronic diseases of women. On making one of my evening visits to this institution with Dr. Alberts, physician in charge, he showed me a boy ten years old who had just been brought in with this disease, and upon whom he proposed to perform the operation of tracheotomy if the case did not improve after one hour.

I administered the chloroform, and the doctor cut down through the skin and underlying fascia, and with great care separated, as he thought, the two lobes of the thyroid gland with the handle of his scalpel, and finally reaching what he thought to be the trachea, made an incision into it. No air escaped, though he pulled the edges of the wound open with a pair of forceps. The true condition of things now flashed over him in an instant. He had gone outside of and behind the trachea, and had opened into the œsophagus. After waiting a few moments and expressing his great horror at what he termed his *extreme stupidity*, he opened

the trachea and put in the tube. With even this mishap this case did well as far as the operation was concerned, though the patient died five days later from extension of the diphtheritic process into the bronchi. The boy was not given any nourishment by the mouth for 24 hours, but after that time he was given fluid nourishment, which passed into the stomach without hindrance.

W. S. CALDWELL.

LONDON, March 3d, 1879.

ARTICLE XII.

REPORT OF THE SOCIETY OF BIOLOGY. Meeting of February 1. President M. Paul Bert.

It has been demonstrated in physics that a body cannot be transparent except all its elements (i. e. physical) have the same *index* of refraction. M. Ranvier stated that this was also true of the cornea, composed as it is of divers histological elements. The speaker had investigated the physical conditions which destroy the transparency of the cornea. The cornea of a frog having been excised and fixed was exposed for 5 minutes to the vapors of osmic acid. Examination immediately after by the microscope, the cornea still remaining fixed, failed to reveal a single cell. If, however, the cornea had been plunged in aqueous humor previous to exposing it to the fumes of the osmic acid the corpuscles were at once apparent. From this double experiment the speaker concluded that the corpuscles of the *living* cornea are *invisible*. Under the influence of watery vapor the fibres of the connective tissue swell, thus diminishing their refractive power. Hence results a loss of transparency—due solely to the imbibition.

Alteration of the Anterior Roots in Saturnine Paralysis.—M. Déjerine said the authors of late years state that in cases of saturnine paralysis changes in the muscular nerves are constantly met with. (Lancereaux, Gombault, Westphal, Mayor, Friedlaender). This alteration, analogous to that observed in the peripheric end of a cut nerve (parenchymatous neuritis of some

authors) is the more marked, the more advanced as a lesion, the longer the duration of the paralysis and muscular atrophy. The same alterations are met with in the radial nerve, but these authors fail to state to what *height* they have found these alterations to extend along the course of the nerve. M. Vulpian, in a case of saturnine paralysis dead in his service, has clearly demonstrated alterations of a certain number of the anterior roots in the cervical region. In this case he very clearly demonstrated the existence of "interstitial neuritis" seated in a certain number of the nerve tubes, some of which were atrophied and reduced to their "sheath of Schwan." The case observed by Prof. Vulpian is the only one up to the present in which examination of the anterior roots has given positive results. M. Déjerine having had occasion to examine the nervous centers and muscles in five cases of saturnine paralysis of the extensors gave the results of his researches. These were examined in the recent condition—the intermuscular and radial nerves, together with the anterior roots—with the following results:

Alteration of Muscles.—Simple atrophy of the primitive fasiculi with multiplication of their nuclei, no trace of fatty degeneration.

Alteration of the Intermuscular Nerves.—Degenerative atrophy of the nerve tubes, granular degeneration of the myeline, multiplication of the nuclei of the protoplasm, destruction of the axis cylinder. This destruction of the nerve tubes is the direct cause of the duration of the paralysis, moreover, it does not affect all the tubes in the same degree; while some are scarcely changed others are reduced to their "sheath of Schwan," others being altered in all degress from the first-mentioned condition to the last. It is, however, rare to meet with a perfectly sound fiber in a preparation.

Alterations in the Radial Nerve.—These same alterations have been found in a certain number of fibers of this nerve in the greater part of its length, and in one case, where the conditions of the autopsy permitted—very near its point of emergence from the brachial plexus.

Alterations in the Anterior Roots.—Examination in the recent condition by treating with osmic acid and picro-carmine has been

made of the anterior roots of four of these cases. In two cases M. Déjerine has very clearly demonstrated the existence of very advanced alterations in a certain number of nerve tubes, alterations in all respects similar to those met with in the intermuscular and radial nerves. In one of these cases, and this is particularly interesting, the patient had paralysis on one side only—the side in which the alteration of the nerve-roots was observed, the other side being absolutely normal. In the three other cases examined by the same methods, the results were somewhat doubtful as to the alteration of nerve tubes, but they did not present the healthy appearance observed upon the sound side, yet it was impossible to establish any distinct alteration beyond a slight atrophy—not very pronounced. The speaker stated that he should examine the spinal cord in these cases and report at a subsequent meeting. M. Déjerine adding these two cases to that observed by Prof. Vulpian, and considering the clinical history of the affection and, moreover, the fact that it is generally bilateral, offered the hypothesis—under all reservations—that saturnine paralysis is probably of medullary origin, a hypothesis that subsequent researches would either confirm or refute, but which, in the actual state of the science, is the only one we have any rational warrant for, in view of the clinical history and anatomical lesions of this affection. Dr. Charcot observed that he had never found any well-marked changes in the spinal cord in cases of saturnine paralysis. M. Ranvier said he did not comprehend degenerative lesions of the nerves proceeding from the periphery to the center. In these cases of saturnine paralysis the examination of sections never showed him any marked lesion, indeed, so far as he could see, they presented very much the appearance of healthy nerves. M. Déjerine reminded those present of what occurred in stumps of amputations, as surgeons well knew there ensued in the cut nerve an interstitial neuritis, which ascended some centimeters along its length, and yet in these cases there were not (intrinsically) any symptoms of spinal irritation.

Contraction in Lesions of the Lateral Ventricles.—M. Cassy gave the results of his experiments upon dogs in the laboratory of Prof. Vulpian. He introduced into the lateral ventricles of a

dog (through the corpus callosum) crystals of nitrate of silver; thus producing superficial lesions of the ventricular walls, with slight effusion. These lesions developed little by little, have not given rise, in some carefully observed cases, to any contraction or any convulsive phenomena. Yet contraction is regarded as the rule in effusions into the lateral ventricles. M. Cassy then asks whether the contraction is not due to the pressure upon the neighboring parts of the ventricular walls, distended by the rapid effusion into these cavities, instead of being a phenomon of reflex action due to irritation of their walls by the pressure of the effused material as regarded by the authors.

In support of his hypothesis, the speaker has injected into the lateral ventricles coagulable liquids, boiled starch in one case, and liquified parafine in the other, and he had then seen a contraction intense and general, at the moment of rapid injection of a quantity of liquid relatively small. Without wishing to generalize unwarrantably, or magnify the importance of his observation, M. Cassy believed, in a general way, that the contraction observed in rapid effusions into the lateral ventricles was caused by pressure upon the neighboring parts. O. C. OLIVER.

HOTEL D'ORIENT, PARIS, Feb. 25, 1879.

ARTICLE XIII.

SOCIETY OF BIOLOGY. President, M. Paul Bert. Extracts from the transactions at the meeting of Feb. 8, 1879.

Mons. Mathias Duval, professor of histology in the faculty of medicine, stated that he preferred a mixture of collodion and alcohol for imbedding tissues of which it might be desired to make sections, instead of the "wax and oil" mixture so generally employed, which is opaque and prevents a clear view of the portion of tissue to be cut, while the former mixture is transparent, and has the additional advantage of a certain degree of elasticity very favorable for obtaining thin sections, of which a number of very fine ones were exhibited, chiefly of embryos.

M. Laborde communicated the results of his experiments on the effect of injections of milk into the veins. He found that the injection of 80 cubic centimeters of milk into the veins of a dog weighing 11 or 12 kilos. caused very rapid death, but repeated injections of 25 to 30 grams were easily borne. Almost immediately after the injection, milk globules were found in the general circulation, the larger always appearing last. Little by little the globules disappeared from the circulation, to accumulate in the "splanchnic organs." In those animals who died in from 20 to 40 hours, M. Laborde found ecchymoses in the lungs and mucous membrane of the stomach. In the centers of these hæmorrhagic spots, he found numerous white globules histologically identical with those of milk. Numerous capillary hæmorrhages were also found in different portions of the encephalon. M. Laborde has also experimented upon frogs, in which class of animals the injection of minute quantities of milk was made with an invariably fatal result. The injections were made into the lymph sacs of this latter animal.

The speaker stated that he considered it prudent to abstain from the injection of milk into the vascular system of man, as had been done by some physicians in the treatment of cholera, except in the so-to-speak desperate cases, under which circumstances alone he considered this bit of tentative practice justifiable. The speaker had been able to preserve a dog in whom fractional doses of milk had been injected into the veins, after a venesection, of 200 grams. If the dog should survive, he would be shown at the next meeting. The president stated that he had also experimented upon dogs by injections of milk into the veins, but the results were too inconstant to permit deductions of any practical avail in the treatment of man.

Dr. Brown-Séquard said his experiments upon these classes of animals had led him to doubt very gravely the therapeutic efficacy of this measure in the treatment of disease, and that he considered the practice indefensible, except in hopeless cases.

M. DeSintef gave reasons why intra-vascular injections of milk were to be considered very dangerous. Fresh milk was certainly least so, but even so soon as 40 minutes after having left the udder, there formed around the globules a film of coagulation,

thus constituting a supplementary envelope, which, according to his investigations of the emboli caused by the injections, produced the infarctions. According to M. Laborde, the red blood globules assimilated the milk globules, which latter surrounded the former, "fusing," as it were, and constituting an envelope of a peculiar fringed appearance, which rapidly dissolved in ether, while the red globule remained intact. Laborde sacrificed a young dog a short time after an injection of milk into the veins, and, as a check experiment, another of about the same age, in which no injection had been made. In the first instance, the appearances of the red globules were found to be quite characteristic.

M. Ranvier wished to make some formal reserves (?) upon this subject of the assimilation of the milk globules by the red blood globules. He wished to remind histologists that the blood contained fat globules, yet it certainly seemed to him that it would be impossible to dissolve these by ether without affecting the red globules themselves. O. C. OLIVER.

ARTICLE XIV.

SOCIETY OF BIOLOGY. President, M. Paul Bert. Meeting, February 15, 1879. EMPLOYMENT OF PROTOXIDE OF NITROGEN IN SURGICAL OPERATIONS.

M. Paul Bert said all the world knew the use that dentists made of the protoxide of nitrogen to anæsthetize their patients. They employed the protoxide chemically pure. American surgeons have also tried the protoxide of nitrogen in the larger surgical operations, but as it is necessary often to suspend the inhalation in order to avoid danger of asphyxia, and as consciousness returns almost immediately upon withdrawal of the anæsthetic, it follows that continuous operation with this anæsthetic is impossible. The speaker had long sought an anæsthetic at once innocuous and efficacious, and had communicated to the society the results of his experiments on the physiological effects of certain anæsthetics, among them the protoxide of nitrogen. Without detailing his experiments at length, he wished to state that

he had been led to give the preference to a mixture of the protoxide with oxygen. The mixture he had employed consisted of 85 parts of the former with 15 of the latter. He found that a bird would live in this mixture for 24 hours. By repeated experiments he had so familiarized himself with the physiological action of this mixture that he tried it in an operation for "ingrowing nail." The pressure in the inhaling chamber was 17 centimeters. The patient, a young woman of 20, slept tranquilly, without having passed through any stage of excitation beyond very few slight contractions.

Almost immediately, on the withdrawal of the anæsthetic the patient recovered consciousness, and was able at once to walk unassisted to the ward, where she partook of her usual meal without any feeling of nausea or other unpleasant sensatión except the pain of the wound.

Lymphatics of the Uterus.—Dr. Mierzejewski, of St. Petersburgh, presented, through M. Pouchat, a communication on the distribution of the lymphatics of the uterus. He stated that there are two planes of lymphatics; one superficial, the other deep, situated under the peritoneal covering, which two sets of vessels communicate by very free anastomoses. The blood vessels, less abundant than lymphatics, are contrary to the statements of Fridolin and Leopold, situated between the layers of lymphatics. These results are in accord with those obtained by Hoggan.

Reproduction of the Vitreous Humor.—M. Phillipeaux had made numerous experiments upon animals which seemed to prove that the vitreous humor is reproduced in the living animal. Punctures of the eye failed to extract entirely the vitreous humor, a small portion always remaining. O. C. OLIVER.

ARTICLE XV.

ANATOMICAL SOCIETY. President, Dr. Charcot.

M. Queneu read a communication on *Lesions of the Anterior Lobes of the Cerebrum.* The patient, a man of 78 years, was brought to the hospital, on the day following an apoplectic attack,

in an unconscious condition, with paralysis of the left inferior extremity and superior extremity of the same side, complicated by slight contraction limited to the hand and forearm of the afflicted side. These paralyses persisted until the death of the patient 6 days after of right lobular pneumonia. The autopsy showed upon the external surface of the right hemisphere, at the level of the superior extremity of the ascending parietal convolution, a spot which seemed less firm than the rest of the encephalon. This spot was so superficial at one point that a portion of its contents, a recent, dark colored clot, escaped through a small rent which appeared at the bottom of the fissure, separating the paracentral from the square lobe. Sections vertical and parallel to the "sulcus of Ronaldo," revealed a hæmorrhagic clot occupying a very small part of the *superior frontal* fasces, the greater part of the superior parietal fasces and rather more than half the superior pediculo-parietal fasces. All the neighboring parts, the corpus striatum, etc., were absolutely unchanged. The great interest of this observation is the rarity of such a lesion occurring in this region, so limited in its implication of the structures adjacent to its seat. The speaker mentioned a case communicated by M. Pitres. The patient, a woman of 65 years, became hemiplegic from an apoplectic attack in 1873. Six months afterwards the patient had an epileptic fit, acting upon the sound (left) side. These attacks repeated themselves in '74, '75 and '76, when the patient died. The autopsy revealed an ochreous clot of the size of an almond, extending from the base of the first right frontal convolution to the base of superior parietal lobule, and extending beneath as far as the superior extremities of the two ascending convolutions. The speaker also gave the notes of two cases in the service of Prof. Hardy. The first patient, a man of 65 years, was brought to the hospital with complete hemiplegia of the right side following an apoplectic attack. At the end of about 7 weeks contraction and atrophy of the paralyzed members supervened. Despite every precaution, a large "bed sore" formed, with diffuse phlegmonous inflammation with septicæmia, to which the patient succumbed. The autopsy revealed a hæmorrhagic clot situated in the superior fronto-parietal fasces of the left centrum ovale. The second case

was that of an old man of 88 years, brought to La Charité Hospital unconscious from an apoplectic stroke, and which presented, as a unique symptom, paralysis limited to the right members, which at the end of 8 days limited itself to the right superior member, persisting so without amendment or contraction till the death of the patient 7 weeks after. The autopsy revealed, besides atheromatous degeneration of the aorta and cerebral vessels, a spot of softening in the left hemisphere, which had the form of a broad fissure extending in an oblique direction as regards the fissure separating the two hemispheres, its anterior extremity situated at the summit of the cone formed by the inferior parietal fasces, its posterior at the sphenoidal fasces. M. Queneu then says that in these cases the lesions were so definitely limited as to render the clinical phenomena as clearly intelligible and as important diagnostically in locating lesions of the cerebrum as physiological experiments. M. Landouzy wished to suggest that the anomalous symptom presented by the patient, namely, contracture of the muscles of the hand and forearm, might be due to the irritation of the gray matter of the brain, since it was shown to have been lacerated at one point by the clot. The speaker had observed a case of hemiplegia (?) following apoplexy, in which case there were contractures of the hand and forearm, which appeared to be due to excitation of the cortical substance superficially intermediate to the paracentral and square lobes. M. Queneu said, in contrast to these cases with well marked symptoms, he wished to mention one in which every known rule of cerebral pathology seemed to have been violated, so to speak. This case was that of a tuberculous patient of 43 years, in whose brain he found a tuberculous deposit as large as a pea, in the inferior fronto-parietal fasces, and yet this patient had never presented a single symptom of cerebral trouble.

O. C. OLIVER.

HOTEL D'ORIENT, PARIS, February 28, 1879.

Domestic Correspondence.

ARTICLE XVI.

A LETTER FROM DENVER, IN WHICH ITS AUTHOR CLAIMS TO HAVE PRECEDED DR. EMMET IN LACERATION OF THE CERVIX UTERI AS A CAUSE OF DISEASE. Read by Dr. W. H. Byford before the Chicago Gynæcological Society, Jan. 31, 1879.

Denver, Col., Jan., 1879.

About four years ago the subject of laceration of the cervix uteri was brought before the medical society of the county of New York, by Dr. T. Addis Emmet, in a paper read before that society, and afterward published in the *American Journal of Obstetrics*, for November, 1874. That paper was received with applause by the New York society, and has since been received with great favor by the profession at large. It would appear from the manner in which the paper has been commented upon, that up to that time the importance of laceration of the cervix had not been at all appreciated by any part of the medical profession, and that except by a few physicians in and about the Woman's Hospital, this lesion had not been discovered. The title of Dr. Emmet's paper, the character of the discussion that took place at the time it was presented, as well as the tone of the publications of other physicians throughout the country, all tend to show that, up to the appearance of that paper, this injury of the cervix was unappreciated, if not unknown.

It is true, that in the *American Journal of Obstetrics* for February, 1869, Dr. Emmet had himself alluded, in a paper on the Surgery of the Cervix, to lateral division or laceration as a condition that sometimes complicated the treatment of dysmenor-

rhœa or sterility. That paper is entitled, "Surgery of the Cervix in Connection with the Treatment of Certain Uterine Diseases," and is devoted to the treatment of dysmenorrhœa and sterility by division of the cervix. He had not, it would seem, at the time of writing that paper, regarded lateral laceration as a cause of disease, but simply as a lesion that interfered with his method of treating dysmenorrhœa and sterility by anterior or posterior division. But on the 28th of September, 1874, the date of the reading of his paper before the Medical Society of the County of New York, he, for the first time, described this lesion as a cause of uterine disease. In the title of his paper he calls it an unrecognized cause of disease.

Dr. Emmet did not, of course, mean that up to that time he had not recognized laceration, or that Dr. Sims and a few others had not; but what he does say or imply is, that except by a few physicians about the Woman's Hospital, this lesion had not been recognized. All the credit is therefore awarded, by the profession, to Dr. Emmet, for being the first to appreciate and describe the lesion as a cause of disease.

Three years before Dr. Emmet's paper appeared, I had written a paper on this subject, which was intended to demonstrate the importance of this accident. This communication of mine was published in the *American Practitioner* for June, 1871, and was at the time sent, in pamphlet form, to all the leading gynæcologists of the United States. That paper not only shows that I had recognized laceration as a cause, and a very important cause, of disease, but it brought, for the first time, this matter to the attention of the profession.

Besides the two papers of Dr. Emmet already referred to, he has still another, written to explain more fully his mode of treatment. This paper is published in the *American Practitioner* for January, 1877. The reason for publishing it is thus stated by himself: "But, unfortunately, too much has been expected of the operation; it has been performed frequently without understanding its principles, and generally without proper preparatory treatment. The consequence has been that within the circle of my professional acquaintance I have already heard expressions of

disappointment from not getting the good results which had been promised for the operation."

This operation consists in making fresh or raw the edges of the rupture, and uniting them with silver wire sutures. That disappointment should have been experienced in a large number of cases treated this way is not, in my judgment, to be greatly wondered at. The condition of the cervix and the mucous membrane covering the cervix is, in a large number of the cases presented for treatment, such as almost to preclude the hope of success. These conditions are well described by Dr. Emmet. The cervix is inflamed, indurated and enlarged. The mucous membrane is inflamed, and its follicles, along the tract of the canal, are in a state of cystic degeneration. To bring together these edges, with the cervix in this diseased state, and expect them to unite, must, it seems to me, very frequently result in disappointment. Dr. Emmet explains the cause of the disappointment in his last article on the subject. He says there must, in many cases, be some preparatory treatment; that when the cervix or its mucous membrane is much diseased, its condition must be improved before the operation is undertaken — the inflammation and hypertrophy must be reduced, and the degenerated follicles removed from the mucous membrane. But just here is the difficulty that so many surgeons have encountered, and will always encounter, in the management of these cases. To remove chronic inflammation and hypertrophy of the cervix, especially if this hypertrophy is due, as he suggests, to arrest of involution, is a work that cannot be accomplished in a few weeks or in a few months. It is always a tedious work, and in not a few cases, either from the exhausted state of the patient, the unfavorable circumstances in which she is situated, or from the extent of disease present, it is a work that cannot be accomplished at all.

In my paper, published more than three years before Dr. Emmet's, I say: "I can see no reason why, after the inflammation is somewhat reduced, and the edges of the wound are fit for union, one or more silver wire sutures may not be used to close the edges, just as Jobert recommended for vesico-uterine fistula."

Dr. Emmet very properly insists that the operation for uniting

these edges should not be performed until the parts are fit to be united. This is just what I stated more than three years before his paper was written. This operation had, at my suggestion, been performed by Dr. E. C. Gehrung, formerly of this city, nearly two years before Dr. Emmet's paper was published, and the case described by me in my report on gynæcology to the Colorado State Medical Society in 1875. In this case there was no induration, no hypertrophy, no cystic degeneration. The parts were "fit to be united," and the operation was entirely successful. At the date of the writing of my paper, I had not myself attempted to cure these cases, except the severest ones, and these I had cured by amputation. But at the time Dr. Emmet first called the attention of the profession to laceration of the cervix as an unrecognized cause of disease, I was treating and curing these cases by amputation when the cervix was much diseased, or by sutures when the parts were in condition, or could be brought in condition to unite, and my views had been published and widely disseminated.

But even if the operation of repairing the cervix could always be as successfully performed as it is said to have been in the skillful hands of Dr. Emmet, I still think there are objections to it, for however successfully the union may be effected, the cervix must be left in a mutilated condition. The delicate mucous membrane formerly lining the canal will have been destroyed by the pressure and friction to which it has been subjected, if not by the cystic degeneration it will have undergone. Important changes will also have occurred in the form of the cervix; its conicalness is increased, its integrity impaired.

Dr. Emmet is of opinion that laceration occurs generally as an accident of labor at full term, and especially after instrumental delivery. It cannot be doubted that lateral laceration is sometimes produced by the great size of the child's head, by the use of instruments, or by the too rapid delivery; but I have for several years regarded laceration as an accident of premature delivery. So fully am I convinced of the correctness of this statement, that I never now meet with a case of laceration that I do not enquire as to the date and number of the miscarriages. I cannot think that ruptures so extensive can occur very often at

the full term of gestation; but it is easy to understand how it will occur in the early months of pregnancy by the passage of the fœtus through a cervix that is, as yet, undeveloped, and whose function it is to guard the pregnancy until the expiration of the full term of gestation. But however this may be, I am certain of the fact that lateral laceration is most commonly caused by abortion—by the premature passage of the fœtus through the unprepared or undeveloped cervix.

Dr. Emmet, in his last article, in describing the minute details of the operation, urges, as a condition of success, that the opposite edges of the laceration shall be quite thoroughly pared or cut away. This must, in many cases, produce, when the wound has healed, great conicalness of the cervix. My experience with these cases does not enable me to speak with positiveness as to the effect that this altered state of the cervix will exercise in preventing future conceptions; but knowing how frequently sterility is due to a conical cervix, I suspect that pregnancy is not common after this operation. Although this operation has been performed many hundred times in the city of New York alone, I have seen no statistics on this point. I will suggest further as my belief, that should a pregnancy occur, the cervix, should much of its substance have been removed, could hardly escape aceration at the time of delivery.

W. H. NEWMAN, M.D.

ARTICLE XVII.

REPLY TO THE LETTER FROM DR. NEWMAN.

Chicago, Feb. 25, 1879.

The communication of Dr. Newman, which was read at the last meeting of the Chicago Gynæcological Society, is so remarkably colored and so misleading in what it contains and in what it strangely omits, that justice alike to Dr. Newman, to Dr. Emmet, and to the medical profession, demands a reply. Dr. Newman bases his claim upon priority of publication, and is aggrieved because the profession accords to Dr. Emmet the "credit

of being the first to appreciate and describe the lesion as a cause of disease." In the paper to which Dr. Newman has alluded, published February, 1869, Dr. Emmet, in connection with the subject of dysmenorrhœa and sterility, speaks of bilateral division of the cervix as an operation productive of evil, and says:

"After this has been done (bilateral division) other difficulties of a serious character arise as a consequence, which more than counterbalance any temporary advantage. But I shall again refer to this subject when treating of lacerations following parturition."

On another page he sums up the evils arising from bilateral division of the cervix, as follows:

"My objections to the lateral operation * * * as an exciting cause of disease are due to the fact that, if gaping of the flaps occur a tendency exists to a rolling out of the lining membrane of the canal. An erosion extending into the canal is soon established, which will recur as often as healed, with the result in time that the whole organ becomes hypertrophied. This source of irritation is due to the fact that whenever the female is on her feet the flaps become separated from pressure on the posterior wall of the vagina. The everted lips in due time become softened and flattened so as to lose all appearance of ever having been in contact. I have seen this condition presenting the appearance of an enormous cervix, over two inches in diameter, with the whole organ enlarged, and every attempt at treatment proving a failure until the true condition was appreciated. I have frequently observed the same effects following lateral laceration of the neck as a result of parturition, and to some extent where only one side had been involved. * * * When lacerated laterally, and the case has been of long standing, the edges of the neck will be felt projecting beyond the vaginal junction as the top of a half-grown mushroom over its stalk. I invariably bring about union of the two surfaces before attempting any other treatment (for dysmenorrhœa, or sterility), whenever I meet this condition in practice, whether it be the result of surgical interference or a consequence of labor."

Then follows a description of the operation substantially as he performs it to-day.

It is therefore certain that Dr. Emmet described laceration as a cause of disease and its operative cure in a paper published more than two years before Dr. Newman published his memoir.

But what does Dr. Newman mean in the following comments upon the very paper from which I have just quoted.

"He (Emmet) had not, it would seem, at the time of writing that paper (February, 1869) regarded lateral laceration as a cause of disease, but simply as a lesion that interfered with method of treating dysmenorrhœa and sterility by anterior or posterior division. But on the 28th of September,

1874, * * * he, for the first time, described this lesion as a cause of disease."

The following is quoted from the memoir of Dr. Mundé,* editor of the *Americal Journal of Obstetrics.*

"Emmet's† first operation was performed November 27, 1862, in the presence of his assistant, Dr. G. S. Winston and of Dr. T. G. Thomas. Although during the next seven years he repeated the procedure many times in the presence of numerous professional gentlemen from all parts of the Union, his first published account of the operation and its technique did not appear until February, 1869. * * * In this publication Dr. Emmet was preceded by a few months by Dr. M. A. Pallen‡ who, independently, he informs me, described substantially the same operation for the same purpose. * * Dr. Pallen calls the lesion "uterine harelip." The operation itself, and after-treatment, are described precisely as by Dr. Emmet, to whom Dr. Pallen (in a letter to me) unqualifiedly accords the priority in devising the operation and recognizing its indications. * * * In spite of these two papers and the constantly increasing number of operations performed by Dr. Emmet, amounting up to 1874 to nearly 200, it was not until the reading of a second and more lengthy paper by Dr. Emmet, * * * September, 28, 1874, * * * that the profession became fully aroused to the immense value of the discovery of the lesion, its consequences and its cure."

Dr. Pallen, who actually anticipated Dr. Emmet in publication, and who operated long before Dr. Newman pretends to have operated, lays no claim to priority in devising the operation or recognizing its indications, while Dr. Newman deliberately implies priority in publication, which he ought to know does not belong to him; and what is even more exasperating, he has left in doubt the question whether he did not also precede Dr. Emmet in recognizing laceration as a cause of disease and devising the operation for its cure, for while he shows a remarkable familiarity with the memoirs of Dr. Emmet, from which he quotes detached sentences and suppresses others to suit his purpose, he strangely omits all mention of the date of Dr. Emmet's first operation, November 27, 1862, six years before the memoir of Dr. Pallen, seven before that of Dr. Emmet, and nine before his own, but is careful to state that at the time Dr. Emmet "*First called the attention of the profession to laceration of the*

* *American Journal of Obsterics*, Jan., 1879.

† A paper by Dr. E. C. Dudley, in the CHICAGO MEDICAL JOURNAL AND EXAMINER, March, 1879, contains the full report of Emmet's first case.

‡ St. Louis *Medical and Surgical Journal*, May 10, 1868.

cervix as an unrecognized cause of disease," meaning 1874, not 1869, he (Newman) was treating such cases sometimes by amputation when the cervix was much diseased, and by suture when the parts were in condition, or could be brought in condition to unite.

Has Dr. Newman studied the methods of Emmet with such diligence in vain? If so, why does he talk of amputation in the very class of cases in which, after proper preparatory treatment, the suture accomplishes its most brilliant and satisfactory results? Experience has abundantly proved that all of these worst cases may be brought in condition for union unless some constitutional cause prevents.

But if Dr. Newman had presented his memoir at any time after 1862, he would have difficulty in establishing his claim to novelty, because since that date few weeks have passed in which Dr. Emmet failed to deliver an informal clinical lecture at the Woman's Hospital, and in these lectures laceration of the cervix was always a favorite theme. Long before the memoirs either of Newman or Pallen appeared, representatives of the profession from *remote States* in the Union, and many also from Europe, had heard him describe laceration as a cause of disease, the treatment preparatory to operation, and had seen him perform the operation. Any one by visiting the Woman's Hospital on almost any of Emmet's operation days, could therefore have carried away the material for an excellent memoir on laceration of the cervix. In fact, the memoirs of Emmet merely contain the substance of three clinical lectures in pamphlet form.

Dr. Emmet never claimed to have been the first to recognize laceration of the cervix. I have his written statement, in a recent letter, that the "cleft" or "fissure" or "uterine harelip" must have been felt and seen from the beginning, but he was the very first to demonstrate that the erosion of the everted intracervical membrane, formerly called "ulceration," is always a laceration. No one before him showed that the cervix may present a normal shape and an apparently normal os externum and yet be the seat of laceration extending even past the utero vaginal attachment. He first demonstrated that the lacerated flaps generally become so softened and flattened by

resting on the floor of the pelvis that they lose all appearance of ever having been in contact with one another, and that the intra-uterine tissue and membrane roll out and form a spurious external cervix which, in shape and position, usurps the place of the normal external cervix. As the late Dr. Peaslee* said, "it was he, who in a happy moment brought the anterior and posterior surfaces together with two tenacula, and instantly (by causing the everted tissue and membrane to roll in) demonstrated that what we all thought was an ulceration was nothing more or less than a laceration.

Dr. Emmet is falsely represented as urging as a condition of success, "that the opposite edges of the laceration be quite thoroughly pared or cut away. He never advocated such denudation except in a few very exceptional cases. Dr. Newman will probably, therefore, have in future little or no use for his idea of the "conical cervix" as a result of the operation. The correspondent urges some *a priori* objections to the operation, but with commendable modesty assigns his limited experience as a reason for not insisting upon them all.

When Dr. Newman proves that laceration occurs more frequently in premature than in full term delivery he will have no difficulty in establishing the accuracy of his assertion. But respecting these opinions I have nothing to add, since this is a controversy, not of opinions, but of facts.

No amount of prospective fame ever tempted Dr. Emmet into premature publication. He waited until he had operated two hundred times for laceration of the cervix, and then twelve years after his first operation so exhausted the subject that little remains to be said. In his work on Diseases of Women, now in preparation and soon to be published, he has pursued a similar course, for few, if any, surgeons in the past twenty-five years have done more of modern gynæcological surgery than he has done. The chaff, the controversies, and out-worn theories which beset the practitioner and distress the student are chargable to men who have written for reputation or notoriety rather than from experience, reflection, and classified knowledge.

E. C. DUDLEY, M.D.

* Mundé *Am. Jour. Obst.*, Jan., 1879.

ARTICLE XVIII.

HOW SHALL THE DEGREE OF DOCTOR OF MEDICINE BE CONFERRED?

Messrs. Editors:—In the call for the convention of medical colleges to be held in Atlanta, May 2d, it is stated that the objects of the convention are "To adopt some uniform system of instruction more in harmony with the requirements of the age," and the following questions are suggested for discussion: "Shall all the colleges require attendance upon three regular courses of lectures during the three separate years ere admitting students to become candidates for the degree of M.D. Is any uniform system possible, and, if so, to what extent is it possible or even desirable at the present time?"

For several years these questions have engaged the attention of the entire profession, but more especially of those engaged in teaching.

Having thought much upon this subject, I accept the invitation which the call extends, for free discussion, and venture to suggest what seems to me a practicable remedy for many of the existing evils due to our present methods of medical training—a remedy which will render it easy to raise the standard for graduation to any desirable grade. With regard to the requirements for graduation, all admit that knowledge is the essential element; but many will disagree as to the best methods of teaching. When or how this knowledge is secured is a matter of little importance providing satisfactory evidence of its possession is required before a degree can be obtained.

We would be glad if the association of colleges could agree to require attendance on three full courses of lectures, and these of nine months each, prior to examination; yet we think the desired result can be obtained without this arrangement.

Practically it matters not where the student gets his information, or how long he is in obtaining it; if he has the requisite knowledge, he should be allowed to graduate; however, as a

knowledge of medicine must necessarily come from long and arduous study, probably no injustice would be done by requiring four full years of medical reading and three courses of lectures prior to graduation. In justice to students, we believe the colleges should institute preliminary examinations, or require other satisfactory evidence of a thorough English education, before admission to their classes; for it is clearly unfair to lead a student to believe he can graduate, to waste his time and accept his money and then refuse to give him a degree because he is ignorant of his mother tongue; and certainly, in this age there is no such pressing need for physicians as to excuse the graduation of those not thoroughly qualified. We would not demand a familiarity with the ancient languages, for although their utility is beyond question, they are not essential if the English be thoroughly understood.

If the convention considers the question of requiring attendance on a specified number of courses, the question of fees is likely to arise, and it may be attempted to secure uniformity in this respect. Such an attempt would doubtless lead to discord, for if uniformity in fees were secured, it would militate against the interests of the weaker colleges. The different colleges should remain free to charge as much or as little as they please, excepting the graduation fee; this latter should be substituted by an examination fee of five or ten dollars (sufficient to cover all expenses attending the examination and issuing of degrees), and no part of this amount should in any case be refunded.

In lieu of the graduation fee, colleges might add something to their fees for each course. This arrangement would cost the colleges nothing; it would be just to students and would remove the opportunity which the public now has for charging the colleges with mercenary motives in graduating some members of their classes.

To repeat, we would suggest preliminary examinations, and an increase of the length of time a student shall read medicine before entering as a candidate for graduation; that colleges remain free to charge what they please for a course of lectures, but that the graduation fee be abolished and its place filled by an examination fee; and that every college use the facilities at its disposal

as best it may in teaching. But we also suggest, and would be glad to urge upon the thoughtful consideration of the convention, a radical change in the method of conducting the final examinations, which would secure uniformity in the requirements for graduation, and at the same time allow the various colleges, without detriment to any of their own interests or to those of the profession at large, to demand any amount of knowledge they may deem necessary before granting the degree of doctor of medicine.

We would like to see those requirements equal those of the colleges in any other country, but this is a matter which might he left to the wisdom of the general profession if the colleges will unite on a uniform system of joint examinations.

We would suggest the election, each year, of a board of examiners, to consist of thirty members, one-third of whom should be elected by the delegates to the Association of American Medical Colleges, from among the teachers in the various colleges, one-third to be elected by the same body or by the American Medical Association, from the profession at large, and one-third to be appointed by the Surgeon-General of the United States from the medical officers of the army and navy; or what might perhaps be better, the entire board to be appointed by the Surgeon-General.

It should be the duty of this board to prepare lists of questions on the various topics for examination, which should be kept secret until the hour of examination, and on a stated day of each year to furnish these questions, in sealed envelopes, to the various colleges, in which, on stated days, the same date in all of the colleges, the envelopes should be opened before the faculty, members of the local profession and the graduating class. One envelope containing questions for examination upon a specified topic to be opened in this manner each day, and the questions given to the graduating class. Thus, examinations in surgery at ten o'clock a. m., June 1st, or any other date agreed upon; in obstetrics at ten o'clock June 2d, and so on until the examinations are completed, the dates, hours and topics being the same for all the colleges. The student should be allowed three or four hours to write down his answers, due precautions being taken by the faculty and local profession, that he received no written or other aid in

his examination. The examination papers might be written with copying ink or pencil, and copies taken of each for future reference.

They should then be sent by express to the Board of Examiners, which should convene on a certain date—for instance, the second day following the last examination—to examine and mark the returns, and issue certificates to the colleges permitting the graduation of all students whose examination average should exceed a certain specified number, say, 70, 80 or 85, the students having been marked on a scale from 1 to 100; 100 being perfect.

If the work of examining the papers should prove too great a task for the Board of Examiners, they might be empowered to select any needed assistants, taking care that the examiners should not know from what students the papers came, and thus avoiding all possibility for the marks being affected by personal friendship or other indirect causes.

No student whose general average fell below the requirements should be allowed to graduate.

Examinations should be held only once a year, and in cases of failure to pass, second examinations should not be granted before the next regular examination.

The adoption of this or some similar method of joint examinations would at once secure a high grade of proficiency in medical graduates throughout the United States, and would thus accomplish an end for which the whole profession is anxious.

By this method no local interests would be affected, each college would still grant its own diplomas, and all could be sure that incompetent men had not been graduated.

It may be objected to this method that such an examination would require much time and expense. Admitting this, would not the ranks of the profession be recruited rapidly enough even then? However, the time probably would not be much more than that now required by the best colleges for their examinations; and even if it should be greater, it could make no possible difference whether the candidate should receive his diploma in ten days or three weeks after the examination, nor would it matter whether he graduated in the latter part of February or June.

The examinations might be held at the most covenient time, and colleges could easily arrange their courses to correspond.

It may be stated that it would be impossible for the board to examine so many papers. This does not seem to me impossible, or even difficult.

Suppose there were fifteen hundred applicants for the degree, and that each of them had been examined on fifteen different topics, we would have 22,500 papers in all, which would be distributed among the different members of the board. Each could easily examine seventy-five papers in one day, making for the whole board 2,250, and ten days of such work would complete the list.

If the examination fee were ten dollars, this would furnish $15,000 to pay the expenses, which would allow $20 per day for fifteen days, or $300 for each member of the board, and would leave a balance of $6,000, out of which to pay the express charges and the cost of diplomas, stationery, etc.

The time would be a matter of no importance; the means would be ample, and the whole could be systematically managed by a permanent secretary.

I have here given an outline of what to me seems a practicable and speedy method of raising the grade of medical education. This is an outline only, but the minutiæ can be easily supplied.

This method would be uniformly just, inasmuch as all students would pass the same examination.

Any method which does not include a joint examination will fall short of the end desired, for however long the course or thorough the teaching, there is always an opportunity for influences to favor the graduation of incompetent men so long as the immediate instructors constitute the graduating board. This is clearly shown by recent complaints concerning the medical schools of Great Britain, and it is not difficult to suggest causes which in certain cases might operate in this way.

Difficulty may arise as to the method of selecting an examining board, from fear that some students would receive beforehand an intimation of the questions to be asked, but it is not reasonable to fear that a board elected annually and pledged to secrecy

would be so dishonorable as to adopt any means for favoring individual students or any particular college.

E. FLETCHER INGALS, M.D.

188 CLARK ST., CHICAGO.

ARTICLE XIX.

OPIUM SMOKING.

Dear Sir: I enclose you a brief article on opium smoking. It was published in the *Missionary Herald*, January, 1879, the organ of the American Board of Commissioners for Foreign Missions, and is altogether reliable.

R. C. HAMILL, 629 Wabash av.

February 10, 1879.

OPIUM ASYLUM AT FOOCHOW.—TREATMENT.

Can the victim of opium smoking be rescued? It is commonly believed that, so terrible is his appetite, he is beyond help and hope. The asylum at Foochow has demonstrated the falsity of this assertion. Connected with the hospital of our mission, under charge of Dr. Osgood, there is a separate building for the treatment of opium smokers, where about sixty patients are received each month. In response to an inquiry as to the method of treatment, Dr. Osgood sends the following account of his practice for the last two years, during which time about 800 cases have been treated:

"1st. The total and absolute discontinuance of the use of opium from the beginning of treatment.

"2d. A trusty attendant to be with the patient, day and night, for the first three days.

"3d. Chloral hydrate for the first three nights, if required.

"4th. Good food, milk, raw eggs, brandy (in some cases), chicken broth. (The above to be taken in small quantities and frequently.

"5th. In diarrhœa, give two drachm doses of a mixture of equal parts of tincture catechu and tincture ginger.

"6th. Vomiting will frequently yield to bismuth in fifteen grain doses; and in some cases a single dose of calomel has acted like a charm. Ice would be of advantage in some cases.

"7th. Throughout the entire treatment it should be remembered that the patient is below par, and requires tonics. Quinine and tincture of iron have a prominent place in our list.

"8th. The patient should expect to suffer more or less for the first three days, and should make himself a prisoner for that time. By the fourth day there is usually marked improvement.

"9th. Usually, by the sixth day all desire for opium is gone. The patient then requires a change of air and surroundings, and tonics for a few weeks.

"The above is a rough outline of our treatment. Each case treated may require some change from the above.

"I believe that ninety-nine out of one hundred can be cured, if the patient has the requisite grace and grit. Out of eight hundred cases there has only been one death, and that was caused, I think, by apoplexy, and not by opium."

SUBERINE FOR CHAPPED NIPPLES.—(*L'Union Médicale du Canada*, January, 1879.)

The treatment recommended by M. Brochard for fissured nipples is so simple that it deserves to be popularized. When chaps exist on the nipples, whatever their extent, the nipple should be washed with pure water, and then dried and dusted with suberine, which, as is known, is impalpable cork powder. The author has used it for several years, and prefers it to lycopodium, for infants, because it contains tannin, and besides is much cheaper. Over the suberine is placed a piece of gold-beater's skin, cut star-shaped, in the center of which several punctures are made with a fine needle. Every time the child is suckled, the suberine is washed of with water, and the gold-beater's skin replaced, the child drawing the milk through it without giving pain. When the child is done, the suberine is again applied as before, and so on.

Reviews and Book Notices.

ARTICLE XX.—TRANSACTIONS OF MEDICAL SOCIETIES.

1. *Transactions of the American Ophthalmological Society.* Fourteenth annual meeting, held at Newport, R. I., 1878. Vol. II., Part 4.

2. *Transactions of the American Otological Society.. Eleventh Annual Meeting.* Newport, 1878. Vol. II., Part 2.

1. The transactions of this society are presented in a modest pamphlet of 150 pages. As usual, there is but little chaff in the published proceedings of this society. Almost every page teems with new and interesting matter. This example of thorough winnowing is worthy of imitation by other societies.

First following the minutes of the meeting is a portrait or brief sketch of the life of Dr. H. Althof, one of the founders of the Society, who died Jan. 15, 1877.

Dr. A. Mathewson contributes "Notes on the Use of Nitrous Oxide as an Anæsthetic in Strabismus Operations." He thinks this agent offers special advantages as an anæsthetic in these operations over chloroform or ether, in that its effect so speedily passes away. In five cases he reports in which nitrous oxide was used, anæsthesia was produced in from one to two minutes and consciousness returned almost immediately. From seven to twenty gallons of liquid gas were used at a maximum cost of one dollar.

The relations of blepharitis ciliaris to ametropia receives further attention from Dr. Roosa. Since reading his first paper on this subject, in 1876, 201 cases of blepharitis have been observed at the Manhattan Eye and Ear Hospital, but in only 48 was the state of the refraction noted. In these, hypermetropia was found

in 34, myopia 1, astigmatism 7, emmetropia 6. He has seen 46 cases of blepharitis ciliaris in private practice, in which there was found hypermetropia 25, astigmatism 17, myopia 2, emmetropia none. The refraction was not determined in two cases.

These statistics are remarkable, and we agree with the doctor that they "are certainly very different from those given by Dr. Alt," and we might add from the experience of others. However, we do not seriously object to the conlusions of Dr. Roosa, and do not see that they are severely antagonized by Dr. Hotz's paper,* which Dr. R. refers to as an answer to his (Roosa's) first paper.

Dr. J. S. Prout has a good article on "Lachrymal Conjunctivitis and some of the other Injurious Effects of Retention of the Tears." We are convinced that obstruction to the tears is a factor too often overlooked or disregarded in the treatment of conjunctivitis, and heartily endorse this article.

Dr. C. R. Agnew contributes an interesting paper on "Cases of Ophthalmic Disease in which Enforced Exposure to Light and Air was Salutary."

A practical and rapid method, with an instrument, for the diagnosis of refraction is presented by Dr. Wm. Thomson.

We are unable to pass upon the merits of the method or instrument from simply reading the description of them.

Dr. John Green also offers some improvements in instruments and appliances for diagnosis: 1. "Test Diagrams for the Detection and Measurement of Astigmatism." 2. "Stereoscopic Diagrams for Testing Binocular Vision." 3. "A New Modification of Loring's Ophthalmoscope." 4. "Improved Series of Arrangements of the Glasses of the Trial Case for Measuring Refraction."

Dr. E. G. Loring presents still another modification of the ophthalmoscope.

Dr. David Webster has an article on the "Ætiology of Retinitis Pigmentosa, with Cases."

Of the 22 cases presented, consanguinity of parentage was traceable in only 3, while heredity was present in 7 cases.

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* Published in the JOURNAL AND EXAMINER, April, 1878.

Interesting cases are presented by Drs. Strawbridge, Bull, Vennyne, Derby, Dixon and others.

Numerous wood cuts, illustrating the text, add to the value of of these transactions.

2. "The Transactions of the Otological Society for 1878," is a neat pamphlet of 280 pages. More than 200 of these pages are filled with the interesting and exhaustive report on the progress of otology by Drs. Vennyne, of Massachusetts, and Sexton, of New York. This report is unusually long from the fact that there was no meeting in 1877, and it covers a period of 2 years.

First following this is a short article by Dr. C. J. Blake on "Acupuncture and Drainage in the Treatment of Serous Effusion into the Tympanic Cavity." The object in view is to avoid the irritation of the discharge upon the inner extremity of the auditory canal in those cases requiring paracentisis of the membrana tympani.

Drainage is effected by means of the absorbent cotton.

There may be exceptional cases in which this treatment would be worth the trouble, but we do not think the irritation from a serous discharge would be sufficient to demand it often.

Interesting cases are reported by Drs. J. Orne Green, A. H. Buck, C. R. Agnew, Geo. Strawbridge, A Mathewson and others.

Dr. Sexton has also an interesting article on "The Relations of the Conducting Mechanism of the Ear to Abnormal Hearing." He concludes that "Two distinct conditions appear to contribute to the abnormities of hearing: disarticulation of the malle-incudal joint and alterations in the tension of the membrana tympani." We agree with the doctor when, in speaking of the inner ear, he says, "Too great importance has perhaps been given the affections of this portion of the ear, especially as regards the acoustical anomalies." But it is certainly taking extreme ground in the other direction to relegate all abnormities of hearing to the conducting mechanism.

Dr. J. Orne Green has an article on "Objective and Subjective Systolic Murmurs in the Ears." His conclusions are that these murmurs may be divided into three classes:

Physiological murmurs in the internal carotid, dependent on partial stenosis of the carotid canal.

Pathological murmurs in the internal carotid, probably caused by a reduced vascular tension dependent upon disturbances in the vaso-motor system.

Pathological murmurs from aneurisms of the vessels of the head. W. T. M.

ARTICLE XXI.—THE CELL DOCTRINE; ITS HISTORY AND PRESENT STATE. By James Tyson, M.D., Professor in General Pathology and Morbid Anatomy in the University of Pennsylvania. Second edition, illustrated. Philadelphia: Lindsay & Blakiston.

The second edition of this well-known monograph issues from the press of L. & B. in elegant form. Readers of the first edition will find in this a large addition to the previously copious bibliography, and the incorporation and adaption of Flemming's observations (with Klein's indorsement) on intra-cellular structure. The tracing of the history and development of the cell doctrine is also somewhat more elaborate—we had almost said tedious—for we think that the value of the book would be enhanced in the eyes of nine-tenths of its readers if less space were given to the resurrection of dead and buried theories—some of them scarcely relevant, and more to the application of the prevalent theory to the facts of physiology and pathology.

The author credits Schleiden (1838) with the conception of the cell as the unit of structure, and Schwann with the successful application and demonstration of this conception in animal tissues; Martin Barry (1840) with a demonstration of cell-genesis by division of the nucleus; Max Schultze (1861) with having overthrown the vesicular idea of cells previously popular; and with identifying cell-contents with "sarcode." He credits Flemming with observations on intercellular structure, but neglects to mention Hensen's previous work in the same line.

Prof. Tyson thinks, however, that the present cell-doctrine was born of Beale, or rather, he adopts that born of Beale as the present cell-doctrine, and elaborates at length Dr. Beale's views on germinal matter and formed material. We notice with pleasure that the author deprecates the use of the term protoplasm, because of its ambiguity—being applied by some to the germinal

or living matter, by others to the non-germinal or formed material. He proposes the substitution for protoplasm of Beale's name "bioplasm," which is not now, and from its derivation can never be, similarly misapplied.

He would further substitute "non-germinal" for Beale's "formed" material—an objectionable change, which should and will fail of general adoption. He indorses Auerbach's views that nucleoli are proven, by their amœboid movements and by their reactions toward staining agents, to be daughter cells; he thinks that a nucleus—i. e. a *differentiation* of germinal matter—is not essential to a cell; accepts Beale's interpretation of intercellular substance—that it, like the formed material proper, is transformed germinal or nuclear matter; and frowns mildly upon spontaneous generation and Charlton Bastian.

While, therefore, the book has a certain interest as a historical memoir, it is chiefly valuable for its clear and concise statement of Beale's views, and for its copious references to the literature of this and kindred subjects. W. J. B.

ARTICLE XXII.—HUMAN OSTEOLOGY, Comprising a Description of the Bones, with Delineations of the Attachments of the Muscles, the General and Microscopic Structures of Bone, and its Development. By Luther Holden, F. R. C. S., etc. Fifth Edition, Revised by the Author, with the Assistance of Alban Doran, F. R. C. S., etc. Philadelphia: Lindsay & Blakiston, 1878; Chicago: Jansen, McClurg & Co.; 8vo pp. 280. Price $5.50.

Many of our readers probably are acquainted with this excellent book, and all undoubtedly know the name of Luther Holden as an anatomist and author of valuable works, of which his Human Osteology is neither the last in rank nor the least in merits.

The present edition is equally as complete as the former, and, therefore, it is to be regretted that in one instance its perfectness should be marred by the oversight of the proof-reader. It has escaped his attention that all the numbers in the text referring to the figures on Plate II. are wrong; for instance, the text refers to fig. 4 as a transverse section of bone, while fig. 4 represents a

longitudinal section; the text points to fig. 3 as illustrating the longitudinal section of bone, while fig. 3 represents cellular cartilage. This confusion of numbers in text and plate cannot fail to perplex the fresh students of anatomy, for whom the book has been written. Fortunately, however, under each figure on the plate is printed what it intends to represent, so that the errors in the text become apparent at once also to the uninitiated student of anatomy.

In the make-up of this book we notice the publishers have imitated the English style of binding the books with the leaves untrimmed. We never admired this, what seems to us, half-done style of book-binding; we do not like to read with a paper-cutter in the hand and we do not like to see a book in our library which looks as if every second leaf were coming out. We would suggest that the publishers adhere to their old fashion of sending out their books in that well-trimmed, elegantly-finished form for which American publications are admired all the world over. F. C. H.

ARTICLE XXIII.—THE ANTAGONISM OF THERAPEUTICS AND WHAT IT TEACHES. By J. Milner Fothergill, M.D., Edinburg.

In this little book, which is the essay to which was afforded the Fothergillian Gold Medal of the Medical Society of London, for 1878, Dr. Fothergill has given us in a concise form the most important results of the experiments which have been made to ascertain the physiological antagonism of an important list of medicines. This he does by detailing the experiments; by a practical inquiry relative to the experiments performed; by a discussion of the rhythmically discharging centers; by a discussion of the action of drugs on the circulation and respiration; the use of antagonisms in actual poisoning and in ordinary practice. We have no hesitation in saying that this little book will contribute largely, based as it is on such well-authenticated experiments, towards removing the stigma of empiricism which is so often but justly applied to a great deal of general practice. To show the practical bearing of the work we quote from the chapter on antagonism in actual poisoning. After detailing a case of poisoning by about seventeen grains of opium, Dr. F. says:

"If a case of opium poisoning were to present itself to me again, especially at an early stage, where I could carry out my ideal plan of treatment, it would go as follows: 'First, empty the stomach thoroughly, then inject a fourth or a third of a grain of atropine before the respiration is gravely affected; then put the patient to bed and carefully note the respiration, the pulse and the temperature. If the respiration were still failing after the administration of the atropine, to inject another third of a grain and still take careful notes, and give a third third of a grain, or even more, if the respiration still fell.'"

The chapter which treats of the action of chloral cannot but enlarge the views of all who read it. R. T.

ARTICLE XXIV.—ESSENTIALS OF CHEMISTRY, INORGANIC AND ORGANIC, FOR THE USE OF STUDENTS IN MEDICINE. By R. A. Whitehouse, A.M., M.D. New York: Wm. Wood & Co.

This little book, which can readily be carried in the pocket, consists of a series of questions and answers, and will form an excellent supplement to the general text book on chemistry. Some people pretend to disdain these small books, which serve in great part the purpose of a more expensive "coach." So far, however, as our experience has gone, those who have used them have always shown best in a case of examination, and their knowledge has not been the more shallow for the assistance thus afforded them. The series of questions on the compounds of carbon constitute an important feature of the book. For those fond of chemistry, who are so situated that they cannot obtain a teacher, this book will be a boon companion. For those who have a teacher it will be a valuable aid. R. T.

ARTICLE XXV.—ELEMENTARY QUANTITATIVE ANALYSIS. By Alexander Clanen, Professor in the Royal Polytechnic School, Aix-la-Chappelle. Translated with additions by Edgar F. Smith, A.M., PH.D.. Cloth, pp. 328. Phila.: Henry C. Lea. Chicago: Jansen, McClurg & Co.

The translation of this brief treatise on quantitative analysis will be found of benefit alike to professors and students who are not familiar with the original language in which it is written

The most approved methods of determining the different elemental and primary compound substances are clearly and concisely displayed, and the suggestions which the experience of the author has found desirable, constitute an important feature of the work.

R. T.

ARTICLE XXVI. ST. BARTHOLOMEW'S HOSPITAL REPORTS. Vol. XIV., 1878. Edited by W. S. Church, M.D., and Alfred Willet, F.R.C.S.

It is but a short time since we had the pleasure of noticing the "Reports" for 1877. The volume under present consideration is in no way inferior to it. Exception can hardly be taken to a single paper of the thirty-three contributed. Without attempting to notice each paper, we must make speical mention of the following: "Observations on Acute Rheumatism," by Dr. Southey; "On the Varieties of Icterus Gravis," by Dr. Legg. Sir James Paget has an admirable article on "Indurations of the Breast becoming Cancerous." Mr. Hussey reports a number of cases of Hydrocele, his favorite treatment being the seton, which in his hands has seemed very useful. Dr. Matthews Duncan reports a case of "Uterine Fibroid Complicated with Inversion;" and Mr. Lyons has an illustrated paper on the Treatment of Compound Fractures of the Lower Jaw, in which he favors the "wire interdental splint." Mr. Doran continues a former discussion on "Intra-peritoneal Ligature of the Pedicle in Ovariotomy," for which he puts in a well-considered plea.

Dr. Moore and Mr. Callender favor us with their experiences respectively, in the casualty and surgical departments. One of the most interesting papers in the volume, in a certain sense, is the "Account of the Casualty Department," given by Mr. Bridges. The casualty department is simply the vast hospital dispensary where some 200,000 patients are annually treated. He gives an admirable idea of the amount of work done by the staff, of the expense, and the amount of benefit actually rendered; and, on the whole, the paper will amply repay for reading by those connected with our smaller institutions of a similar character.

In a paper on "Manipulation," Mr. Marsh has a word to say

about the bone-setters and some of their results, giving cases. Mr. West follows with an "Analysis of Forty Cases of Rheumatic Fever," and Dr. Church with a very carefully reported "Case of Intra-thoracic Tumor." Dr. Harris has an interesting paper on the "Diagnosis and Treatment of Apparent Drunkenness," in which he shows how easy it may be to mistake the alcoholic for the apoplectic condition, and vice versa. He thinks it better to treat all such cases very carefully in order to be on the safe side.

Mr. Ormerod contributes some "Cases of Diseases of the Spinal Cord," and Mr. Steavenson some "Observations on the action of Pilocarpine" in three cases of Bright's disease, in each of which the drug had to be discontinued. Mr. Cripps adds some statistics with regard to the heredity of cancer; and Mr. Keetley a paper on "Compression versus Inflammation," in which he argues that the great advantages of properly applied compression are overlooked and under-estimated.

In the way of literature of special departments we are favored with papers by Mr. Clarke on "Wounds of the Ciliary Region," and by Mr. Vernon on "Commencing Cataract." Both of these are admirable. The series of papers closes with two papers by Mr. Willett on "Spinal Disease."

The "Proceedings of the Abernethian Society," and the usual statistical tables complete this fourteenth volume, which is replete with interesting matter. R. P.

ARTICLE XXVII. — CYCLOPÆDIA OF PRACTICE OF MEDICINE. Edited by Dr. Von Ziemssen. Vol. VIII. Diseases of the Chylopoëtic System, with Chapters relating to Diseases of the Bladder and Urethra and Male Genital Organs. Wm. Wood & Co., New York, 1878.

This volume includes articles by Ziemssen and Zenker on Diseases of the Œsophagus, including morbid growths, parasites, etc., covering 214 pages.

Bauer devotes 130 pages to Diseases of the Peritoneum, including typhlitis and perityphlitis. Mosler's contribution on Diseases of the Spleen covers 200 pages, and includes leucæmia and melanæmia.

Concerning Diseases of the Pancreas, of which little or nothing can be diagnosed during life, Friedreich gives us 80 pages; while Merkel adds nearly 40 pages on Diseases of the Supra-Renal Capsules, an equally obscure subject. With reference to the important topic of Bladder and Urethral Affections, Lebert furnishes an article of 150 pages, and Curschmann supplements it with nearly two-thirds as many pages on Diseases of the Male Genitals. We have been particularly pleased with the stand taken by the last two writers concerning the delicate but important topics of masturbation, seminal losses or spermatorrhœa, false and true, and the pages on chronic pyorrhœa in females, and pyorrhœa, both inflammatory and chronic, in males.

The volume is a very important one, and contains a vast store of information gathered from various sources in a very interesting and condensed shape. P.

Article XXVIII.—Cyclopædia of Practice of Medicine. Edited by Dr. Von Ziemssen. Vol. XIII. Diseases of the Medulla Oblongata and Spinal Cord. By Prof. Erb, of Heidelberg. New York, Wm. Wood & Co., 1878.

The volume opens with an introduction, anatomical and physiological, followed by general symptomatology and ætiology, and general therapeutics. This portion alone, from such a master-hand, is of great value. We are pleased with his views, coinciding, as they do, with those of the best specialists, that masturbation is not, *per se*, more pernicious than natural coitus.

Diseases of the Membranes of the Cord require 70 pages for their elucidation, while 540 pages are devoted to diseases of the cord itself. Under this latter head are included wounds, spinal concussion, spinal irritation, which the author recognizes as a distinct condition, and spinal nervous weakness.

Myelitis, Acute and Chronic, the Various Forms of Sclerosis and Paralysis, and "Rare and Doubtful Diseases" receive very extended consideration.

The balance of the volume is devoted to Diseases of the Medulla; this part opening with another introduction to this particular subject, equally elaborate with the rest of the author's work. Hyperæmia, anæmia, injuries, acute bulbar myelitis,

bulbar paralysis, and various other lesions are handled in a most scholarly way. We are inclined to think the author lays too much stress on the diagnostic value of the tendon-reflex, but this is a comparatively trifling matter. The book is of immense value, and should and does stand a monument to the indefatigable industry of its author. P.

BOOKS AND PAMPHLETS RECEIVED.

Health Primers; four vols. 1. Exercise and Training; by C. H. Ralfe, M.D. 2. Alcohol, its Uses and Abuses; by W. S. Greenfield, M.D. 3. The House and its Surroundings. 4. Premature Death, its Promotion and Prevention. D. Appleton & Co., New York.

Health and How to Promote It. By R. McSherry, M.D. Cl., pp. 185. 1879. Appleton & Co., New York.

General Surgical Pathology and Therapeutics, in 51 Lectures. By T. Billroth. Translated from German Ed. by C. E. Hackley, M.D. Cl., pp. 773. 1879.

Clinical Lectures on Diseases Peculiar to Women. By Lomb Atterill, M.D. Fifth Ed., revised and enlarged. Phil., Lindsay & Blakiston, 1879. Cl. pp. 342.

A Manual for the Practice of Surgery. By Thos. Bryant, F.R.C.S., etc. 2nd Amer., from 3d Revised Eng. Ed. Phil., H. C. Lea, 1879. Leather, pp 945.

Yellow Fever. By Thos. O. Summers, M.D.

Index to Original Communications in the Med. Jours. of U. S. and Canada for 1877. By W. D. Chapin. Cl., pp. 48.

Transactions of the Medical Society of the State of Tennessee at its Forty-fifth Annual Meeting. 1878.

First Annual Report of the State Board of Health of Illinois. 1878.

Transactions of the American Dermatological Association at the Second Meeting held at Saratoga Springs, Aug. 27, 28 and 29. 1879. Rep. from *New York Med. Jour.*, Oct., Dec., 1878, and Jan. and Feb., 1879.

Revue de la Clinique de Maladies des Femmes de la Faculté de Médecine de Lyon. By Joanni Rendu.

Points in Diagnosis of Hepatic Affections. By E. J. Janeway, M.D.

Circular in Reference to American Archæology. Smithsonian Miscellaneous Collection. 316.

In Memoriam, Dr. Landon R. Longworth. By F. Forchheimer, M.D.

Excerpta from the Annual Report to the Board of Health for 1878. By J Holt, M.D., Sanitary Inspector of the 4th District of New Orleans.

Information for the Taxpayers; Medical Laws; the State Board of Health; Finances.

Memorandum of the American Public Health Association on Legislation Affecting the Public Health.

Report on Aconitia in Trigeminal Neuralgia. By E. C. Seguin, M.D. Reprint from *New York Med. Jour.*, Dec., 1878.

Cases Illustrating Two Rare Diseases of the Eyelids—Syphilitic Gummata of the Conjunctiva. By Chas. Stedman Bull, M.D. Rep. from the Transactions of the Amer. Ophthalmological Society, 1878.

Diphtheria and Its Treatment. By Ch. H. S. Davis, M.D. Rep. from *Richmond and Louisville Med. Journal.*

Report of the Pennsylvania Hospital for the Insane for the Year. By Thos. S. Kirkbridge, M.D.

Report of Investigations into the Pathogeny of Diphtheria Conducted by Ed. Curtis, M.D., and Thos. E. Satterthwaite, M.D.

Address to the Medical Profession. By W. A. Hammond, M.D.

A Case of Inflammatory Fungoid Neoplasm. By Louis A. Duhring, M.D. Reprint from the *Archives of Dermatology* for Jan., 1879.

A Clinical Lecture on Anæsthetic Leprosy. By James Nevins Hyde, M.D. Reprint from *Amer. Practitioner*, Feb., 1879.

Medicine, the Present and Future. By J. W. Compton, M.D. Rep. from *St. Louis Med. and Surgical Journal*, Jan., 1878.

Proceedings of the Board of Experts Authorized by Congress to Investigate the Yellow Fever Epidemic of 1878.

Notes on Salicylic Acid. By Ed. R. Squibb, M.D. Read before the Medical Society of the State of New York, Feb. 2, 1875.

MEDICAL REMUNERATION.—Doctor: "Um! most insolent!" (To his wife) "Listen to this, my dear;" (reads letter aloud) "Sir: I enclose P. O. order for thirteen shillings and sixpence, hoping it will do you as little good as your two small bottles of 'physic' did me."—*Punch.*

Summary.

Collaborators:
DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY, DR. D. R. BROWER.

ANATOMY.

ANATOMY OF THE MENINGEAL NERVES.—Duret. (*Brain.*, April, 1878.)

The following very lucid résumé of the origin and distribution of the meningeal nerves is extracted from a paper by Duret, "On the Rôle of the Dura Mater and its Nerves in Cerebral Traumatisms."

(*a.*) *Nerves of the Dura Mater.*—These all spring from the fifth pair. The *anterior* arise from the ethmoidal branch of the nasal and are distributed around the ethmoidal fossa and orbital roof. The *middle* spring directly from the Gasserian ganglion and proceed outwards, plunging immediately into the dura mater, nearer the internal than the external surface, ramifying in all directions over the temporo-sphenoidal region, and up to the parietal region of the membrane; several of the branches are lost in their course; two or three can be traced up to the vicinity of the superior longitudinal sinus. The *posterior* arise from the ophthalmic branch of Willis, not far from the Gasserian ganglion, cross the trochlear nerve, to which they are closely applied (some have thought they arose from this nerve), and arrive at the tentorium cerebelli, where they divide into external and internal branches.

The internal, two or three in number, course inwards so as at once to gain the base of the falx cerebri, into which they pass and

ascend to gain the vertex. The external pass toward the lateral sinus and bend so as to reach the posterior part of the falx cerebri, in which they lose themselves.

Duret is inclined to the belief that the nervous filaments which are situated nearer the inner than the outer aspect of the dura mater end in special terminal organs, which increase the delicacy of their sensibility. The marked physiological troubles which ensue on their irritation lead to this belief.

(*b.*) *Nerves of the Arachnoid and Pia Mater.*—Luschka and Bochdalek have described nerve fibers in the arachnoid. According to Kölliker these filaments belong to the vessels of the pia mater. It is certain that a large number of the nerve fibres coming from the sympathetic accompany the carotid and vertebral arteries in the cranium.

Purkinje and Kölliker describe nerve plexuses at the base of the cranium surrounding the arteries of the circle of Willis. Their fibrils accompany the vessels which proceed from this, and are distributed with them over the whole of the pia mater. Kölliker claims to have followed them into the substance of the brain as far as vessels of ninety-nine, and less.

All these nerve fibers which accompany the arteries so far are the vaso-motor nerves of these vessels. They are the agents of reflex vascular disturbances so often occurring.

PHYSIOLOGY.

ON ALCOHOL.—M. Rabuteau. (*Progrès Médical*, December 28, 1878, p. 979.)

M. Rabuteau exhibited to the Society of Biology a specimen of alcohol obtained from potatoes. It consisted, according to M. B., of 50 per cent. of ethylic alcohol, 15 in 1,000 of isopropylic alcohol, traces of propylic alcohol and of two varieties of amylic alcohol. He has made experiments with these varieties of alcohol on frogs. He finds that a watery solution of ethylic alcohol, 1 in 50, produces no injurious effects on the frog; a solution of the same strength of isopropylic alcohol kills them in a few hours;

a solution of same strength of propylic alcohol kills them in an hour, while a solution of the same strength of amylic alcohol kills them instantaneously. Amylic alcohol is in fact poisonous to frogs, he states, when used in the proportion of 1 pint to 500 parts of water. The frogs were subjected to the vapor of the solution. He insists on the differentiation of the affection known as alcoholism into two varieties: *Ethylism*, characterised by the laughing joviality of old Bacchus, and *Amylism*, or *Polyalcoholism*, which is characterised by the heavy stupidity arising from the modern whisky.

Hygiene of the Eye.—In the same session of the Society of Biology he presented the results of his researches on the well-being of the eye. He claims that if the number of near-sighted persons have increased in France, it is because sufficient attention has not been paid to the causes of the fatigue of that organ. Every one knows, he adds, that the eye soon becomes tired by looking at any article printed in squares of different colors. The same effect follows on reading from a book which remains fixed on the table, whereas if the book is held in the hands, and thus subject to a gentle motion, the fatigue is much less.

Black lines also on a white ground, such as are found in the majority of books, also fatigue the eye unnecessarily. A yellowish ground, he claims is the least fatiguing.

Another special cause of fatigue is reading of long lines.

In order to avoid the increase of myopia he suggests:

1. Let the light in the schools be abundant.
2. Let the type be large and on paper with a yellowish tint.
3. Lines of six centimeters in length are the least injurious.

PRACTICAL MEDICINE.

CHLORAL IN MALIGNANT CHOLERA.—(*Br. Med. Jour.*, Sept. 21, '78.)

Surgeon Major Hall of the Indian Army Service, reports at length a case of Asiatic cholera which had proceeded to a stage of extreme collapse, and which he successfully treated, as follows:

He used a solution of chloral, one in ten, and injected the equivalent of six grains, not simply under the skin, but deep into the substance of the muscles, changing the direction of the needle without withdrawing it from the skin. Improvement was manifest in a few minutes. In the course of eight hours thirty-two grains were thus injected, according to the urgency of the symptoms. Careful nursing and the exhibition of chloral *per os*, served to bring the case completely out of danger. Alcohol was scrupulously avoided. But little soreness followed the *deep* injections.

The writer argues that in this disease the arterial tension is much increased, and that as the cold stage comes on there is spasm of the muscular walls of the heart so strong that there is almost continuous systole. In deep, cholera collapse the heart sounds are inaudible, and pulse almost imperceptible. In such a condition of syncope as this, stimulants do absolute harm; their physiological antagonists are indicated, and hence the benefit rendered by the chloral in the above case.

SURGERY.

COTTON IMPREGNATED WITH CAMPHOR AND GLYCERINE FOR DRESSING WOUNDS.—M. Paoli. (*Journ. de Med. et Chi. prat. L' Union Médicale du Canada*, Jan., 1879.)

The author believes in the noxious influence of the air upon wounds, not only from the germs which it contains, but from the dust, and even the oxygen and nitrogen, and in general whatever it may contain. To protect wounds from its influence he recommends the following: wash the wounds with aqueous solution of carbolic acid, 1 part to five hundred; cover with a thick and large layer of cotton first moistened aud then impregnated with glycerine, the wound being first bathed with glycerine, and then sprinkled with powdered camphor. Over the wet cotton a thick layer of dry cotton is placed, and the dressing is rarely renewed, except the first few days when it may be re-applied every three or four days. Under this dressing the aspect of the wounds is

excellent, and the cicatrization goes on regularly and without accident.

As examples of the value of this treatment the author cites several interesting cases; a case of gun-shot wound of the scrotum, a penetrating wound of the skull, a fracture of the sacrum by gun-shot, the ball entering the pelvis, a compound fracture of the leg, a penetrating wound of the knee, amputation of the leg, etc., etc. In anfractuous wounds he injects glycerine.

A priori, this dressing which the author also applies to simple contusions should produce the good results proved by experience. Its three elements, camphor, glycerine and cotton, are all excellent protectors for wounds. Camphor is an excellent antiseptic. Glycerine is also of much value as a topical remedy. Guyon uses with all the precautions of the antiseptic method, cotton saturated with carbolized glycerine, and has excellent results.

DENTAL GRAFTING.—(*Archives Générales de Médecine*, Jan., 1879.)

We have already called attention to the inaugural thesis of Dr. David on dental grafting. (*Arch.*, Feb., 1878.) In support of the method exposed in his remarkable work, the author now communicates to the Academy a series of observations which testify to its value. Twenty times he has applied it to teeth recognized as incurable; he has had but one failure. To extract a tooth, subject it to an operation impracticable in the mouth, reinstate it in its alveola; such is the method the operator follows. In ten to twelve days, on an average, the tooth is grafted by the intermediary of the alveolo-dental periosteum, has regained its solidity, and is cured as well as the secondary affections of which it was the point of departure. This has been proved in an evident manner by one of the most interesting cases in which, with the view of reducing an anomaly of direction, a tooth had to be extracted and replaced twice; this case furnished the rare occasion of proving the renewal of the vascular connections of the pulp. Here then is an operation destined, thanks to these later labors, to transform dental therapeutics.

OBSTETRICS.

CASE OF DESQUAMATION OF THE EPIDERMIS IN A CHILD BORN ALIVE.—M. Charrier. (*L'Union Médicale*, Dec. 28, 1878.)

The following very rare case was reported by M. Charrier to the Société de Médecine. On July 9, 1878, I was called to a woman pregnant with her second child. The pregnancy had been normal, with the exception of a bronchitis treated by Dr. Millard. At one o'clock the pains which had occurred at rare intervals since morning, became more frequent, and I was called, arriving at half-past three. I found the lady already suffering the pains of expulsion, although the uterine orifice appeared to be only the size of a franc piece. The pains continued more and more violent, and at five and a half, a final pain of extreme force and duration expelled the head from the uterine orifice and beyond the vulva. The child was born with two circles of the cord around the neck, one of the loops passing under the right axilla and over the left shoulder like a scarf. The length of the cord was 83 centimeters. Half asphyxiated, pale as wax, it was only after stimulation for a minute or two with friction to the child that the child uttered its first cry. But what especially attracted my attention was the greenish red color of the umbilical cord, which was flattened like a ribbon, and appeared to belong to a dead-born child, long macerated in the waters of the amnion. Moreover, the entire epidermis of the body came away on the slightest friction, as in a macerated fœtus dead six or eight days. The epidermis of the foot was detached exactly like a glove.

The next day the epidermis had all fallen, except in two or three small places on the left leg, the back and the right arm. The child then had the natural color and temperature; it sucked with vigor, and, since, its health has been good.

I confess I have never seen a similar case; I have seen many cords greenish and withered, but never, in a living child, a desquamation like that which occurs in a fœtus long dead and macerated in the amniotic fluid.

I believe that if the labor had been delayed two or three days,

the child would have been born dead; but there a question in legal medicine presents itself: Can the fœtus, then, *before death*, become macerated in the waters of the amnion? Upon what does this desquamation of the entire epidermis depend? No eruptive disease, measles or scarlatina had been observed about the mother during her pregnancy. I remarked at the beginning that her pregnancy had been normal, except a bronchitis. To what, then, can we attribute the pathological state of the child? I will add, the membranes were very friable, and the same color as the cord, that is, reddish and greenish. The amniotic fluid had no odor. The placenta was healthy. It is evident that the fœtus suffered *in utero*, but the semi-asphyxiated state in which it was born is explained by the winding of the cord around the neck and chest. But this hindrance to circulation could not be the cause of the *macerative desquamation* before birth.

GYNÆCOLOGY.

INDICATIONS AND CONTRA-INDICATIONS FOR OVARIOTOMY IN THE TREATMENT OF OVARIAN CYSTS.—S. Duplay. (*Archives Générales de Médecine*, Jan., 1879.)

The following is the author's résumé of an interesting article on this subject:

1st. Before thinking of proposing the question of the indications and contra-indications of ovariotomy, the surgeon should have established as exact a diagnosis as possible, and have made an exploratory puncture.

2d. In relation to the time when ovariotomy should be proposed, I formally reject the early operation, and I believe that ovariotomy is only indicated when the cyst has become, by its volume, a cause of excessive inconvenience to the patient, or when it occasions, by local or general accidents, imminent danger to life.

3d. Late ovariotomy, although it should not be adopted, as a general rule, is not contra-indicated by the existence of the most grave local and general complications, such as peritonitis, inflammation, suppuration, gangrene of the cyst.

4th. Ovariotomy is absolutely contra-indicated in cases of cysts of the ovaries complicated by diseases, general or local, independent of the presence of the cyst, and capable of causing by their ulterior evolution the death of the patient.

5th. The divers local conditions dependent upon the state of the cyst (walls and contents), of its connections (adhesions), of the state of the peritoneum (ascites), are of but little importance as regards the indications and contra-indications of ovariotomy. I should, however, make two exceptions: first, relative to uniocular cysts, with serous contents, non-albuminous (cysts of the parovarium), in which ovariotomy, I think, as a general thing, is not indicated; second, relative to extensive adhesions to the uterus, bladder, rectum, etc., which, especially when accompanied by abundant ascites, often indicate a malignant affection. In these cases, without daring to prescribe ovariotomy absolutely, I would advise its postponement as long as possible.

6th. Finally, ovariotomy is applicable to cysts of the ovary complicated by pregnancy, when the life of the mother and child is directly menaced by the development of the tumor, and when tapping is without effect.

PATHOLOGY.

DERMOID CYST IN THE CEREBELLUM.—(*Br. Med. Jour.*, Nov. 30, '78.)

At a November meeting of the London Pathological Society, Dr. Irvine showed the brain of a child who was admitted into Charing Cross Hospital for partial loss of power in the lower limbs. She was seven years old, and the only history was that two or three years before she had received a severe blow on the back of the head. Soon after admission, she suffered from convulsions, occurring frequently till her death, three months later. Before death she presented a double internal strabismus and complete paraplegia.

Post mortem the dura was adherent to the skull and to the cerebellum. On cutting through it there escaped considerable semi-fluid, pus-like fluid, which was found to be sebaceous matter. In the fluid was found a tuft of hair. The cyst occupied both

halves of the cerebellum, and reached down to the cervical part of the cord. The neighboring parts were somewhat inflamed and softened. Dr. Irvine believed the presence of this dermoid substance in the brain could be explained by reference to the embryonic development of the parts.

The specimen was considered unique.

THERAPEUTICS.

JABORANDI IN PLEURITIC EFFUSIONS. — A. Laramée. (*L' Union Médicale du Canada*, January, 1879.)

Before coming to the main point, the author gives a brief history of this medicine. Jaborandi (*pilocarpus pinnatus*) is a shrub, 8 or 10 feet in height, with leaves alternate, pennate, compound, growing in the north of Brazil, near Pernambuco. It bears flowers and fruit, but up to the present, only the leaves, it seems, have been experimented with in therapeutics.

The active principle of jaborandi, pilocarpine, was discovered by Hardy in 1875. This alkaloid, known under the name of nitrate or muriate of pilocarpine, is high priced, but on the other hand an exceedingly small quantity, three centigrams, equals four grams of the leaves in infusion. The most common and economical plan of giving jaborandi is to give the infusion of the leaves, which is prepared by infusing four grams of the bruised leaves in a cup of boiling water for quarter of an hour, and give to the patient immediately afterward.

It is also given in the form of fluid extract in the dose of 30 drops to 4 grams, and in pills of 20 centigrams, each pill equaling 4 grams of the leaves. The muriate and nitrate of pilocarpine are often used for hypodermic injections in the proportions of 16 milligrams.

All the doses mentioned may be increased. The leaves furnish a large quantity of essential oil, but it has not yet been experimented with.

General opinion attributes the discovery of jaborandi to Dr. Continho, of Pernambuco. This gentleman having experimented

with it, and having recognized sialagogues and sudorific properties in a high degree, sent some samples to France in 1873.

The contradictory reports, which have circulated for some time, regarding the effects of jaborandi arise from the fact that a plant coming from South America and bearing the same name was confounded with the true plant, but it is now certain that the true species is the only one exported to Europe and the United States.

Prof. Gubler, at the Beaufon Hospital, Paris, experimented with it on a large scale, and some months later, MM. A. Robin, Vulpian, Hardy and several others carefully studied jaborandi, especially its physiological properties. All recognized in it a powerful action on the salivary and sudoriferous glands. Since then jaborandi is regarded as the most energetic sudorific and sialagogue with which we are acquainted.

Under the action of this medicine, five to fifteen minutes usually, but never later than twenty-five minutes after its administration, salivation and sweating take place and go on increasing. Salivation, which begins first, ceases generally at the end of two hours, and the sweating a little later. The patients are tormented by a continual spitting, and frequently by nausea, and even vomiting, especially if they swallow the saliva. The salivary glands are then more or less swollen and at times painful. Sweating is less marked in persons subject to gastric disorders and constipation, but more free in those subject to sweating.

The temperature of the body is not sensibly modified. Sometimes vertigo comes on, but it is only temporary.

M. Gubler has noticed secondary actions, such as hypersecretion, from the lachrymal glands, from the nasal membrane and from the pharyngeal, tracheal and bronchial glands.

M. A. Robin observed that the day of the experiment the urine diminished notably, but the day after there was a considerable increase. However, other things being equal, it may be said that the reduction of the amount of urine is not proportioned to the loss of fluids from the skin and salivary glands.

There is a marked antagonism between jaborandi and atropine. At the University College, London, they succeeded with 6 milligrams of nitrate of pilocarpine in producing an abundant saliva-

tion, and with 3-10 of a milligram of atropine it was arrested. At Paris, M. Vulpian succeeded in preventing salivation and sweating in one of his patients, to whom he had given a few minutes previously a milligram of sulphate of atropine.

One drop of solution of nitrate of pilocarpine (in the proportion of 65 milligrams to 30 grams of water) is sufficient to produce contraction of the pupil when dropped in the eye.

The above are the most important physiological properties of jaborandi. The author gives the two following cases to illustrate its action in pleuritic effusions.

The first case, in December, 1877, was that of a man aged 40 years, the subject of pleurisy for about 12 days. All the signs indicating inflammation of the left pleura were present; pain in the side, dry cough, early effusion, producing dullness, which changed its position with that of patient, absence of respiratory murmur, bronchial respiration, etc. He had recourse first to the classic treatment, emetic, vesicants, calmatives, etc. He finally tried jaborandi, 4 grams of the leaves infused for 15 minutes and given in one dose. Five minutes after, salivation began and lasted for nearly two hours. It was abundant; sweating less prominent, showing itself especially between the shoulders. There was some nausea, but no vomiting. The sensibility and swelling of the salivary glands were tolerably well marked. Nothing peculiar as regards secondary actions. The same day the patient felt much better, the dullness diminished sensibly and the respiration was more free. Two days after the signs indicating renewed effusion, a second dose was given, and this time the effusion disappeared permanently.

The second case was a lady of 40 years. She had latent effusion on the right side of six weeks standing when she entered the hospital. Jaborandi was given in the same dose and manner. The effusion was greater than in the first case. He had resource to jaborandi four times during twelve days. Sweating and salivation were abundant. There was some nausea and vomiting, swelling of salivary glands, and hypersecretion from lachrymal glands, and nasal membrane. A third and similar case was also cured in the same manner by the author. The author remarks that the first dose was more energetic than following ones. Pa-

tients should avoid exposure to cold during the sweating. After the disappearance of the effusion the friction of the pleura was very distinct.

Prof. Combal thus formulates the action of jaborandi in pleuritic effusions:

1. Jaborandi is very useful in the treatment of pleuritic effusions of whatever age or however abundant the liquid.

2. Jaborandi causes most often the liquid to disappear very rapidly, and the friction sounds to be heard.

3. The effects of jaborandi are of short duration; the liquid often reforms with great rapidity. It is necessary then to insist upon the use of jaborandi, and usually the liquid may be made to disappear permanently.

4. But when once the liquid has disappeared and the friction sounds have appeared, jaborandi becomes absolutely useless. We must then, more generally, to accomplish a cure, resort to tonic treatment and sometimes to local applications of tincture of iodine for example.

M. Dujardin-Beaumetz has employed jaborandi with success in albuminaria, in which there was general œdema, continual vomiting, and scarcely 60 grams of urine passed a day. An infusion of 6 grams of the leaves in 90 grams of water was given by the rectum, and produced an abundant salivation and sweating. The patient was improved promptly.

Jaborandi also finds a use in asthma, especially in the humid variety.

OIL OF AMBER.—(*Phil. Med. Times*, Oct. 26, 1878.)

Dr. Finck relates several cases of angina and functional cardiac disturbances, especially those cases into which the neuralgic element enters, which yielded rapidly to the influence of the oil of amber. He gave it in doses of from four to ten drops, repeated every thirty or forty minutes during a paroxysm, or in much smaller doses for continued use along with other remedies. In hysterical angina, also, and in the breast, pang of deep agony or grief, eight or ten drops of the oil, with some ordinary antispasmodic remedy every twenty minutes, will often give the happiest relief.

Items.

COMMENCEMENT EXERCISES OF RUSH MEDICAL COLLEGE.—The thirty-sixth annual Commencement exercises of Rush Medical College took place in the presence of a large audience in the Third Presbyterian Church of this city on the afternoon of the 25th of February. Out of one hundred and thirty-eight who entered the graduating class, one hundred and twenty-three received the degree of doctor of medicine. That so large a number failed to pass the examinations is no discredit to the gentlemen themselves, but we take it as an evidence that the professional attainments demanded by the college are higher than ever before, and as a consequence the class which has just graduated, taken as a whole, is just so much the better qualified to enter upon the duties of their profession.

The exercises were opened with prayer by the Rev. Theo. N. Morrison, Jr., after which followed the conferring of degrees; the charge of the President; response on behalf of the class by Dr. Charles E. Fogg, and the valedictory address by Dr. A. B. Strong. Following the valedictory address was the presentation by the class of a complete case of surgical instruments to Dr. Strong. Subjoined are the names of the graduates:

Chauncy Willard Amy, Marion J. Anderson, Erastus Yoemans Arnold, Samuel Bailey, Clarence Perley Battles, Rufus Henry Bartlett, Edwin Julius Bartlett, A.M., Robert Wesley Baker, Osron Dorcelia Benson, Stillman Marion Benner, Benjamin Jephthah Bill, William Thomas Bishop, Adelbert Henry Bowman, William Burgess Brengle, John Franklin Bradshaw, Charles Theodore Burchard, Martin Caldwell, Charles David Camp, James Cavaney, George Gillette Chittenden, William Wallace Cole, A.B., Albert Stewart Core, Charles John Creighton, Willis Edward Crane, Theodore Parker Crosse, Stephen Cummings, Charles Eustache Cyrier, John Oscar Dawson, Edward Davies,

James Blaney Devlin, Constantine Lomax Dicken, James Michael Dinnen, George Warritte Dosh, Cyrus Donaldson, Julian Arthur Dubois, Thaddeus Augustus Dumont, Karl Friedrick Wilhelm Eberlein, James Plaster English, Heman Ephram Farnsworth, Charles Elwin Fogg, A.B., Henry Jacob Fleischer, Thomas Benton Francis, Otto Tiger Freer, William Henry Harrison Gable, Benjamin Marvin Gill, Orris William Grant, Thomas Baldwin Graham, Bernard Charles Gudden, Addison Hawkins, Edward Leander Hills, William Wesley Hitchcock, Charles Henry Holmes, Elwyn Ashworth Holroyd, Harry Pettit Huntsinger, Henry Porter Johnson, Francis Marion Jordan, Samuel L. Kilmer, Charles Krusemarck, Antonio Lagorio, William Henry Lanyon, Fred Willard Lester, James Lonsdale, James Ancel Lord, Edward Macdonald, George Lemuel Marshall, Allan Aleyne Mathews, Edgar Jehial Meacham, William Meyer, Charles Frederick McComb, Hugh E. McCaw, John Wilkinson McCausland, John Calhoun McClintock, Charles William McGavren, Carroll Everard Miller, William Emil Julian Michelet, Albert Roscoe Mitchell, John Vincent Moran, Daniel Grove Moore, Harold Nicholas Moyer, Timothy Douglas Murphy, John Benjamin Murphy, Joseph Aloysius Muenich, John Tenbrook Newton, John Francis O'Keefe, John Walter O'Connor, Harlow N. Orton, William Enos Parker, Emery Allen Paschal, John Thompson Rice, Charles Winter Robbins, Charles Alexander Rogers, M.D., Joseph Louis Ross, Moses Archie Rush, B.S., Rockwood Sager, Ora Owen Sawyer, B.S., William Raymond Shinn, John Campbell Sheridan, Anton Shimonek, Courtney Smith, George Lewis Smith, William Theodore Frelinghuysen Smith, William Peter Smith, Francis Marion Smiley, Thomas Jefferson Sprague, Jr., Theodore Parker Stanton, Simon Strausser, George Charles Stockman, B.S., James Harrison Stipp, Charles Stuart, M.D., John H. Thornton, William Porter Verity, William Philander Walker, Solon Robertson Wakefield, James Wallace, Francis Alvin Weir, Florado Houser Wellcome, Frederick Charles Werner, PH.G., Herman L. Wilson, M.D., David Henry Worthington, Frank Rubin Woodard, Magnus Youngstedt. Honorary, Dr. J. H. Gardiner.

At half-past seven in the evening a largely attended reunion

of the alumni of the college took place at the Tremont House. This was the first union which has occurred since the disastrous fire of 1871, which not only destroyed the college and its records, but also the records of the Association, so that the addresses of its scattered members were lost, the constitution of the Association was burned and amid the general wreck none had found time to take the necessary steps toward reorganization. Recently Dr. J. H. Etheridge succeeded in obtaining the addresses of over twenty-two hundred of the alumni; a committee was appointed to discover the names of the old officers, and make the necessary preparations for the reunion. Invitations to a banquet were extended by the faculty of the college to all of the alumni of the college.

A partial copy of the old constitution had been found, and from it a new one was drafted, which was adopted. The President of the Association, Dr. C. Goodbrake, of Clinton, Illinois, who was elected in 1870, had been found, and he was present to preside at the reorganization. The officers elected for the ensuing year were: President, Dr. Robt. M. McArthur; 1st Vice President, Dr. Wm. Fox; 2nd Vice President, Dr. Harold N. Moyer; Secretary and Treasurer, Dr. E. Fletcher Ingals. Executive Committee, Drs. Norman Bridge, V. L. Hurlbut and F. A. Emmons.

After the business of reorganization had been accomplished, the retiring President delivered an able address which received the hearty endorsement of the members; after which the gentlemen adjourned to the banquet hall.

After the banquet the regular toasts were offered and responded to in a very happy manner.

Dr. Abner Hard in answer to the toast "Our Elder Brothers," gave a brief history of the early days of Alma Mater; Dr. E. W. Lee spoke for the County Hospital Staff; Dr. J. E. Owens gave a history of the spring faculty; Dr. Fox spoke in feeling terms for the alumni scattered throughout the length and breadth of the land; Dr. S. L. Kilmer spoke for the class of '79; Dr. V. L. Hurlbut responded to the toast "An old 'Rush,'" and Prof. J. Adams Allen for Alma Mater. The regular toasts being concluded, Dr. Goodbrake again took the chair and called for the unfinished business, under which head Dr. E. Ingals introduced

the following resolutions, which were ordered published, and at his request laid over until the next annual meeting for discussion.

The Alumni Association of the Rush Medical College desire to express in a formal and public manner the affectionate regard which they entertain for their Alma Mater, their pride in her past history, and their confident hopes for her increased usefulness in the future. We hold that her supreme duty to the public, which has always accorded her a generous support, demands that her first aim and object should be to aid in axalting the attainments of the medical profession, and by so doing increasing its usefulness, power and respectability. As a mode of accomplishing these results we would respectfully offer to the Board of Trustees of the College, the following suggestions:

First.—To increase the regular annual term of college instruction to a period of not less than nine months.

Second.—To require attendance on three full terms of medical lectures as a pre-requisite to admission to examination for the degree of Doctor of Medicine.

Third.—To institute preliminary examinations for students who apply for matriculation to the school, admitting only such as have at least a thorough English education.

The miscellaneous business was followed by impromptu speeches from several gentlemen. Many instructive and witty remarks were made which we are unable to publish. Dr. Etheridge suggested that a portion of the annual dues be appropriated for prizes, for the encouragement of original investigation. Dr. Gunn stated that the Faculty of the college considered, and should at all future reunions consider the association as their guests, and should therefore insist upon defraying all the expenses of the banquet.

Adjourned to meet again commencement eve, 1880.

THE following new chairs have been established by the Trustees and Faculty of Rush Medical College, and filled by appointments of the gentlemen named:

A professorship of Gynæcology—Dr. Wm. H. Byford.

A professorship of Orthopædic Surgery—Dr. Jno. E. Owens.

A professorship of Dermatology—Dr. James Nevins Hyde.

TWENTIETH COMMENCEMENT EXERCISES OF THE CHICAGO MEDICAL COLLEGE.—MEDICAL DEPARTMENT OF NORTHWESTERN UNIVERSITY.

The twentieth annual Commencement of this college was held in the Plymouth Church, on the afternoon of March 4th, 1879. The church was well filled with an interested audience. The platform, which was tastefully decorated with flowers, was occupied by the Faculty and some of the Trustees of the University, and the front central pews by the members of the graduating class. Prayer was offered by the Rev. Dr. Everest. Certificates for the undergraduates, and for hospital and dispensary service, were distributed; and the degree of Doctor of Medicine was conferred upon the members of the graduating class by Prof. N. S. Davis, Dean of the Faculty, aided by the recording secretary, Prof. L. Curtis. A very appropriate valedictary address was delivered by Prof. S. J. Jones, and an unusually excellent response in behalf of the class, by F. E. Stevens, M.D. The first prize for the best inaugural thesis was awarded to Charles Herbert Fegers, whose thesis contained an excellent account of *A New Spinal Supporter*, devised by himself. The second prize was awarded to Henry Clay Mitchell, for a thesis on the *Peristaltic Action or Motion of the Mesenteric Blood-vessels.* At suitable intervals throughout the exercises, excellent music was given by Benj. Owen, the organist and by the Blaney Quartette. The following are the names of the graduating class: John Francis Abel, Burton B. Aplington, Charles Henry Bryant, Ed. Livingston Cary, Lorents Andreas Claussen, Shobel Vail Clevenger, Francis Jewell Crane, Charles Herber Fegers, Adalbert R. Fellows, William Griggs Goffe, Omar Oakley Hall, Everett Charles Hartley, Dennis John Hayes, Ernest Clark Helm, William Malcolm Jackson, Hugh Lawrence Jenks, Homer L. Leland, Thomas Smith McDavitt, Matthew Harrison McKillip, Henry Clay Mitchell, William David Morgan, John Francis Mulholland, Penn Walker Ransom, William Henry Roberts, George William Robinson, William Henry Schick, Smith Augustus Spilman, Frank Eugene Stevens, John Stout, Norton Strong, Abraham Lukert Thomas, Robert VanDeusen, John M. Wilcox, William Calvert Wolf, Ansel Woodworth, George Harvey Wright. To these were added

the names of Robert H. Brown and Henry W. Waldeman, examined at the close of the first term of the college year; and Philemon D. Harding, of Goshen, Indiana, on whom was conferred the Honorary Degree of M.D., making *thirty-eight* regular degrees out of a total class of students numbering one hundred and fifty-six.

ALUMNI ASSOCIATION:

The thirteenth annual re-union of the Alumni Association of the Chicago Medical College was held at the Palmer House in the evening of the same day. An unusually large number of members of the association were present, and the proceedings were of an interesting and important character, Dr. N. Senn, of Milwaukee, presided. A brief address of welcome was delivered by Dr. Blanchard, in behalf of the committee of arrangements, and the proceedings of the last meeting were read by the secretary, Dr. D. A. K. Steele. A large number of new members were initiated, and a very interesting necrological report was read by Prof. M. P. Hatfield. The president, Dr. N. Senn, delivered a very interesting and valuable address on the importance of the thorough study of anatomy. The Association took some important action, not only earnestly endorsing the long and graded course of instruction established by the college, but affording substantial aid in adding to the appliances and usefulness of the physiological laboratory. After the business of the Association had been transacted, an elegant banquet was enjoyed in the usual manner until a late hour.

ANNUAL MEETING OF ILLINOIS STATE MEDICAL SOCIETY.—The regular annual meeting of the Illinois State Medical Society will be held at Lincoln, Illinois, commencing at 10 o'clock, a. m., of Tuesday, May 20th, 1879, and continue two or three days. The local committee of arrangements will make all proper efforts to render the meeting pleasant and profitable to all who may attend. The following standing and special committees are expected to report:

Committee of Arrangements.—Drs. R. P. Wilson, C. T. Wilbur, L. L. Leeds, P. L. Diefenbacker and N. S. Reed.

Committee on Practical Medicine.—Drs. G. W. Jones, J. T. Crow and L. B. Moore.

Committee on Surgery.—Drs. John E. Owens, H. H. Deming and H. Z. Gill.

Committee on Obstetrics.—Drs. C. C. Hunt, David S. Booth and W. M. Kaul.

Committee on Gynæcology.—Drs. T. D. Fitch, P. L. Diefenbacker and N. Bridge.

Committee on Ophthalmology and Otology.—Drs. S. J. Jones, J. Perrin Johnson and H. B. Young.

Committee on Drugs and Medicines.—Drs. J. F. Todd, C. B. Johnson and John Wright.

Committee on Necrology.—Drs. T. F. Worrell, G. W. Albin and E. Ingals.

Committee on Syphilis.—Dr. W. M. Chambers.

Committee on Psychological Medicine.—Dr. A. McFarland.

Committee on the Advancement of Physical Science.—Dr. S. H. Stevenson.

Committee on Croup.—Dr. H. Z. Gill.

Committee on Use of Hydrate of Chloral and Bromide of Ammonium in Obstet. Practice.—Dr. C. H. Norris.

Committee on Medical Education.—Drs. E. Ingals, R. G. Bogue and D. Prince.

Each permanently organized local medical society is entitled to one delegate for every five of its resident members; the faculty of each regular medical college is entitled to two delegates; and the staff of every chartered or municipal hospital to one delegate. It is hoped that the profession of the entire State will be well represented at the coming meeting.

N. S. DAVIS, *per. Secretary.*

CHICAGO, ILL., March 15th, 1879.

A LETTER has been received by the Illinois State Board of Health from Göttingen, Germany, asking whether there is such a medical school as the University of Medicine and Surgery of Haddenfield, New Jersey. It seems that a diploma of this institution was presented by a veterinary surgeon in Berlin, who was trying to get a German degree, but owing to the fact that German uni-

versities have a rule that a degree from a small one is to be held equal, and therefore not to be superceded by a degree from a large institution, this university refused to grant another degree. A copy of the *Göttinger Zeitung* was also received, containing a copy of the diploma, and, as was supposed by Prof. Schwarz, it proves to be fraudulent, as there is no school of this character at Haddenfield. The letter also states that there is an agency in Germany for the sale of spurious diplomas.

VITAL STATISTICS.—CHICAGO, March 15, 1879. *Dear Sir:* At the last meeting of the West Chicago Medical Society, the resolution given below was discussed and adopted with great unanimity. We hope that you will take an early opportunity to secure its consideration by your local or county medical society, and also by the State Medical Society.

NORMAN BRIDGE, M.D., *Prest. West Chicago Med. Soc'y.*

W. T. BELFIELD, M.D., *Secretary.*

Resolved, That in the opinion of the West Chicago Medical Society, it is the duty of the State Board of Health to procure an amendment of the law relating to the collection of Vital Statistics, securing the incorporation of those sections of the New Hampshire and Connecticut laws which provide for the compensation of persons who make returns of births and deaths, at the rate of twenty-five cents for each birth or death returned and recorded within the limits of the State.

THE sudden death of Dr. Jno. M. Woodworth, late Supervising Surgeon General of the United States Marine Hospital Service, is already known to many of our readers, from the general publicity which the event has occasioned. Dr. Woodworth, as is well known, was a physician of this city, and his professional associates and friends in Chicago have felt, even more keenly than others, the loss his death has occasioned to the roll of honor in the profession of this city, as well as to the public service.

We propose to publish, at an early date, a fit memorial of his life and character.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, April 7 and 21.
West Chicago Medical Society—Mondays, April 14 and 28.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.
Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Prof. Hyde; 3 p. m., Medical, by Dr. Bridge.
Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.
Rush Medical College—3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.
Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman.
Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.
Woman's Medical College—11 a. m., Ophthalmological, by Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.

THE

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[In these pages dimension and weight are expressed in terms of the Metric System, and temperature in degrees of the Centigrade Scale.]

Original Lectures.

ARTICLE I.

ON THE MASTURBATION, SPERMATORRHŒA AND IMPOTENCE OF ADOLESCENCE. A lecture delivered at Rush Medical College, April 10, 1879, by JAMES NEVINS HYDE.

GENTLEMEN:—Few disorders occasion greater mental distress to the patient than those, real or fancied, which are referred to the male organs of generation. Few also present more perplexing problems to the consideration of the physician. So intimate is the relation between the brain and the sexual organs, that a mere impression upon the eye, or an emotion, is sufficient in many men to produce turgescence of the penis. In case, therefore, of a real or fancied disease of these parts, the trouble is largely originated, aggravated or corrected by the mental condition.

It is especially with this important fact in view, that I desire to-day to consider those aberrations of adolescence, which are betrayed in masturbation and the conditions commonly described as spermatorrhœa and impotence.

The subject is a momentous one, and has naturally not failed of

due consideration by competent authors. Still it has been neglected or lightly treated by many writers, for the reason, it may be supposed, that the theme has been especially chosen for the exploitations of the unscrupulous charlatans, whose ignorant and pretentious pamphlets are written and circulated for the purpose of enriching their authors at the expense of the timid. Again, our medical periodical literature, of late years especially, has been concerned chiefly with the medical and surgical treatment of cases of this class. But the necessary and useful measures suggested, seem to me to bear no comparison in importance with what may be called the rational treatment of the mental condition of these patients.

The period of pubescence in the male, no less than in the female, is attended with marked and significant phenomena. In the case of many young men it lapses without producing physical disturbance, as some children escape dentition without serious annoyance. With other youths it is different. Ignorant of the physiology of the sexual organs, or instructed only from the lips of their misinformed companions, the light which they can throw upon the subject is usually of a very distorted and discolored quality. In the midst of the social surroundings of the present day, it cannot be questioned that there is frequently a precocious awakening of the sexual instinct. Whether, however, that awakening be precocious, tardy or timely, it is tolerably sure to make itself known. The genitals become physiologically congested, the seminal vesicles distended with their contents, the testicles turgid, and the erections of the penis, habitual with every healthy lad, become less frequently the reflex evidence of a full bladder or a distended bowel, and more often the sign and symptom of a true sexual impulse. Every one knows that these are the natural preparations for the reproduction of the race.

Now if it were possible to seize this moment in each instance, it would be a wise and timely course to then instruct the boy with regard to his awakening powers. He should be told that every healthy man has sexual instincts, that no man need be ashamed of such instincts; that he only need feel ashamed of such instincts who permits them to control him or to entice him into depraved practices; that, properly controlled, his desires will

eventually be the source of an actual benefit to him in mind and body; and that, if improperly controlled, they may produce a great deal of wretchedness and misery.

Unfortunately, such a course is rarely possible. In a certain proportion of cases, masturbation is begun either under the teachings of others of his own age, or solely from the promptings of the period of his life.

Certainly at this day, it is unnecessary to repeat that the sequence of events we have considered, is often precipitated by the physical conformation of the lad. I have heretofore dwelt upon the fact, that a congenitally tight or redundant prepuce may lie at the foundation of a large proportion of these cases. If the mucous surface of the glans be kept in an exquisitely sensitive state by its tight envelope, if it be further irritated by an imprisoned smegma, it can be well understood how the manipulation of the parts in the act of preparing to urinate, and even the accidental contacts of the sled, the back of a pony, the tree up which he climbs, and even the bedclothing at night, are capable of awakening in the boy at once a revelation and a revolution. Every father should be advised to see that his son has a fair chance in the struggle of life, where the fittest survive, guaranteeing to him a free prepuce, and a clean glans. None the less, should it be certain that a hernia is properly supported, a varicocele attended to, and a tendency to prolapse of the rectum relieved. These and possibly a few other morbid conditions are capable of doing mischief in consequence of the reflex irritation they occasion.

Now it happens in a large number of cases, that these young masturbators sooner or later become alarmed at their practices, in consequence of some information they receive. Often this latter is of a most mischievous character. Occasionally too, the religious element is predominant, and the mental condition of these young men becomes truly pitiable, even when at intervals, impelled by a misguided passion, they continue to handle themselves. Some are overcome and entirely unmanned by the "sins" they have committed, and curse themselves bitterly in their moments of depression. Others believe that they have accomplished the ruin of body and soul, and are already condemned for their misdeeds, to a life

of misery in this world, and a future of despair in the next. This is no overdrawn picture. I have received letters on this subject, that are eloquent enough to excite the sympathy of the most unimpressible; and am satisfied that a certain small proportion of unexplained suicides, are the result of this mental strain. A full and free confession to one who is wiser than they in these matters, is of immense value to these unfortunates. There is a burst of sobs and tears; and the whole trouble is often over after they have received some sound information and advice.

The facts are nearly these: Masturbation is not a crime nor a sin, but a vice. They who make confession with promise of reform, should be kindly told the truth about it. Though a vice merely, it is nevertheless a very filthy and disgusting vice, and should be classed with such degrading habits as picking the nose and scratching the anus. The very worst that masturbation does for the immense majority of those who practice it, is the loss of self respect it occasions, and the despondent mental condition it often brings to those who become morbid with respect to its injurious consequences. The best thing to say to these patients is to assure them that they have already reaped the fruit of their folly in their misery; that no possible evil consequences will follow in the future so long as they amend; and that the best way to treat the habit of masturbation is to abandon and forget it, as they would any other nastiness.

I say that no evil consequences will follow, for such certainly is the experience of the best authors upon the subject. Sir James Paget remarks, in his clinical lecture upon Sexual Hypochondriasis: "I believe you may teach positively that masturbation does neither more nor less harm than sexual intercourse practiced with the same frequency in the same conditions of general health and age and circumstances."* This admirable essay is classical in the field which we are now surveying, and I know of no other upon the same subject of equal value. The author goes on to show that when there is mischief, it results rather from the quantity than the method of the excesses; and that he had never seen nor heard anything which would lead him to believe that the ef-

* Clinical lectures and essays, London. Longmans, Green & Co., 1875, p. 284.

fects of occasional masturbation were different from those of intercourse, or that there was any justification for the special dread with which many sexual hypochondriacs regard it.

Dr. G. M. Beard pertinently remarks* that the genital organs were designed to bear a vast amount of abuse without permanent injury, and, respecting the relative harmfulness of the natural and unnatural methods of excitation, he thinks masturbation is worse simply because it can be practiced earlier in life, also at any time when alone, and therefore more frequently. Dr. H. C. Wood† expresses his belief as follows: "Some persons think that masturbation is more injurious in its effects than excessive venery. I do not believe this."

My own convictions upon this point are positive. During a part of my professional career I was the surgeon of a man-of-war, and had the opportunity of carefully observing and treating for long periods of time, hundreds of men, varying in age from that of the messenger-boy to the veteran of the top, some of them from the lowest and worst ranks of life, living between the decks of a vessel, completely cut off from the companionship of females for months at a time, many of them indulging their appetites without restraint in more than one unnatural manner. Since the years of the war, I have had the opportunity of carefully watching a large number of men of another class — those who, possessed of means and opportunities, have indulged in excessive sexual intercourse, both within and without the pale of matrimony. There cannot be a question but that the last named have been by far the worse sufferers. Miserable as must be the unnatural gratification of the appetite, we must admit that excesses of a natural sort are worse in their remote consequences.

For, let it be noted, that in the immense majority of cases, even after years of indulgence, sooner or later masturbators abandon their habit. Fear, courage, marriage, the wider knowledge and self-restraint that come with years—these, and a host of other influences operate finally with most men to end their trouble. They became husbands and fathers, and it may be presumed, their lives are the sweeter for the conflict they have sus-

* Proceedings of the Medical Society of the County of Kings, April, 1878.

† Clinical Lectures, Phil. Medical and Surgical Reporter, Dec. 22, 1877; p. 481.

tained. Our countryman, Hawthorne, has drawn a true picture of this conflict, in his criticism of the famous painting by Guido, in the Church of the Cappuccini, in Rome, representing Michael, poised in the flush and triumph of victory, with one foot upon the neck of the prostrate demon. Not even an archangel, writes Hawthorne, could escape from such a struggle with unruffled feathers.

Naturally enough, soon after he abandons his practices, the young man will notice that he has nocturnal discharges of semen, sometimes with, sometimes without dream or erection. If he were anxious when he had not abandoned the habit, his anxiety is now increased ten-fold. He peruses some wretched pamphlet on "Lost Manhood," only to find there his worst fears confirmed. He has sowed the wind, surely he is now to reap the whirlwind. Very probably, too, the extrusion at intervals of a mass of hardened fæces from the rectum, has squeezed a small quantity of the prostatic fluid from his urethra, which is to him conclusive evidence that he is the victim of "spermatorrhœa." If he can find also a few shreds of mucus from the prostatic urethra in the urine, or can discern, after any occurrences of a kind calculated to stimulate the genitals, a transparent fluid escaping from the urethra, the cup of his misery is nearly full.

But what are the facts? The young man who has masturbated has probably succeeded in simply awakening and developing prematurely his sexual powers. If he had never masturbated, the chances are that, sooner or later, he would have observed that he had nocturnal discharges. I never knew of a chaste celibate leading a sedentary life, who did not at times, during the years of sexual power, have similar annoyances. The passage from the urethra of a small quantity of prostatic fluid or the secretion of Cowper's glands, either during expulsive straining at stool or, obviously as a preparatory lubrication, after stimulation of various kinds, is common enough.

None of these is a symptom of disease—certainly not of true spermatorrhœa. Perhaps it would be well to declare to you here and now the fact of the great rarity of true spermatorrhœa. I feel quite sure that more young men suffer annually from hydrophobia and the stroke of lightning, than from this bugbear of

timid and nervous youths, and yet the mass of mankind spend their days without apprehension of mad dogs or thunder storms.

True spermatorrhœa is a disease rather of middle life and advanced years. It is significant, generally, of a grave disorder of the spinal medulla. An unprovoked discharge of semen in the daytime is far more rare than four-leaved clover. Even the nocturnal discharges of youth are largely made up of the liquor prostatæ.

Fluids of this character are secreted to be excreted. The mistake of many lies in assuming that they are secreted to be stored for use at some future crisis. But the testis is for secretion, and there is no storeroom of the genitals larger than the seminal vesicle. A seminal vesicle distends with its contents only that it may be relieved of them. It is probable that in a state of celibacy, a certain number of nocturnal discharges each month are positively beneficial. For a day or two days after this event there may be an unusual degree of languor and a sense of fatigue, but the tone of the system is afterward rapidly restored.

The analogy in the female is very perfect. The periodical emissions from the unimpregnated uterus. correspond very fully with the periodical discharges from the prostate, which is conceded to be the uterine analogue. In each case, the discharge may or may not be associated with the ejection of spermatozoa or ova. It is strange that young women, often those hysterically inclined, who have once experienced the alarm of a first menstruation, can regard thereafter with composure a periodical occurrence, the like of which, in the case of the young man, may become to him the source of a profound dejection. Nor does the analogy between the two cease at puberty. It is when nearing the period of the menopause that we look in women for that sub-peritoneal, sub-mucous or interstitial uterine fibroid development which in men of fifty or sixty years of age is represented in prostatic hypertrophy and interstitial or polypoid tumors of precisely analogous texture.

But, it may be objected, there is no marked periodicity in the expulsive function of the prostate. This is unquestionably an error. A periodicity certainly exists, though it may be, and often is, masked by the stimuli of the imagination and of modern

social life in large cities. Married men have often admitted to me the fact that, at certain periods of the month, they were very much more disposed to sexual indulgence than at others, and have been immensely surprised to learn that in this particular they were by no means singular. The same thing is probably true of the unmarried youth who is not unduly stimulated. There are periods in the month when the prostate is more disposed to functional activity than at others. Hence it is that, at times, a young man will have discharges several times during the same night, or even several nights in succession. The fact is to him portentously alarming; and might be indeed, if such a state of affairs were permanent. But such a state of affairs never is permanent. Nature is more conservative than the apprehensions of puberty. There is a prostatic no less than a uterine ebb; and these periods of prostatic activity will be succeeded by periods of prostatic repose, if only the youth will dismiss his anxieties and fears, and suffer his generative organs to repose, where they were intended to repose, under the shadow of the laws which govern the involuntary or, as Bichât calls it, the vegetative half of his organism.

But, unless instructed, he will rarely do this. He approaches his physician with complaints that have the exact flavor of the advertisements of irresponsible men in the daily newspapers, and the effect would be ludicrous were the complainant not seriously alarmed about himself. He is afraid of insanity. But the truth is that only a very small number of persons who live in apprehension of insanity, ever become insane. The one characteristic of insidious cerebral disease is the unconsciousness of the patient that he is losing, or has lost, his mental equipoise. The man of whom the skilled physician becomes suspicious, is he who thinks it necessary to insist upon his sanity. Many insane males masturbate, and I have seen insane patients with singular delusions respecting the subject of their masturbation and their sexual organs, but these are assuredly the results rather than the causes of the mental derangement.

The young man whose case we are considering, will often complain also that he is losing his memory, and that he sees "spots dancing before his eyes." But the power of memory is the re-

sult largely of education. The memory of many insane patients is in the highest degree excellent, and some of the healthiest and most intelligent men whom you ever meet, are so deficient in memory and absent-minded, that they are the laughing stock of their acquaintances. Every physician knows furthermore that slight corneal opacities, floating particles in the humors of the eye, and even retinal derangements, may produce images of spots—the muscæ volitantes of writers—which are consistent with perfect health.

I have said that the sedentary life of the youth in our large cities, is responsible for a great share of this sexual hypochondriasis. Hundreds of thousands of young men in this land were tormented in a similar way eighteen years ago, when the turmoil of civil war first agitated the country. They abandoned their sedentary lives, entered camp, lived on the coarsest fare, struggled with musket and knapsack over their long marches, and sank down wearily at night, often on the bare ground, into the most blessed and dreamless repose. To their astonishment they forgot, because they were compelled to forget, their sexual complaints. In this way the great war proved a blessing to whole regiments of young men.

But the last and sorest complaint of the youths of this class, is that they are "impotent." The question of matrimony is presented to them finally, and they recoil before it as before a plunge into a cold bath. Many of them will say that they have tested themselves, and found that they were utterly incapable of effecting intercourse. Upon the slightest contact with the female genitals they have, they report, a seminal discharge, even before the possibility of the occurrence of an erection. Or, if an erection has occurred, it was so feeble and transitory, that almost immediately after the intromission of the organ, the ejaculation was accomplished. Perhaps they will confess that they were rallied or reproached by their companion for their failure, and that they have been brooding over this misfortune till the burden has become will nigh intolerable.

Now this question is one of importance. The great, the pressing need of many of these young gentlemen, is a proper sexual hygiene. They need physiological rest of the sexual organs, not

absolute rest. Absolute rest is the doom of the Oriental eunuch. Physiological rest is the boon of regular and temperate gratification of desire. A promise of this rest is held out by marriage; and that proffered by any illegitimate relation, is pregnant with disaster and danger. How can we ensure for them this physiological rest, and in what cases can we advise marriage with confidence?

It seems to me that there is great and general misunderstanding about this entire question of virility. 'Tis a shame that such an honest word should come to have its splendid quality apply only to that baser office in man, which he shares with his first cousins of the brute creation.

The sexual act is by no means the supreme expression of manhood. Celibacy in both sexes is compatible with the attainment of the highest types of physical excellence. I have not the time, nor is this the place, for a digression in which to describe those nobler gifts of a true virility which have, in all ages, distinguished the best and worthiest of our sex. We must be content with pointing to the fact that the idiot, the imbecile, the consumptive, the syphilitic and even the paralytic of the male sex, have again and again reproduced their kind, and are to-day burdening every commonwealth with the care of their ill-begotten offspring. But to the youth who is inflamed with passion, the act assumes an immense and undeserved significance. The whole heavens are brass till his ardor is quenched. Well were it for him and for those like him, if they could express the sentiments of that rare and wise physician Sir Thomas Browne:

"I could be content that we might procreate like trees, without conjunction, or that there were any way to perpetuate the world without this trivial and vulgar way of coition; it is the foolishest act a wise man ever commits in all his life; nor is there anything that will more deject his cooled imagination, when he shall consider what an odd and unworthy piece of folly he hath committed."*

Turgescence, erection, and intromission of the male organ are not essential to procreation. The one requisite is the supply of the

* Relig. Medici, Ticknor and Fields, Boston, 1862, p. 137.

male element; and true aspermatism, when double epididymitis has not preceded, is rare indeed. It is at times merely necessary that the spermatic fluid should be applied over the external genitalia of the female, to insure impregnation. Even when there is diurnal ovulation, as in the fowl, the application of the ano-genital orifice of the cock to the corresponding part of the hen, will insure fertility. The records of medicine are full of illustrations of the fact that an impenetrable hymen, spasm of the sphincter vaginæ, and even amputation of the penis, constitute no bar to pregnancy.

But the young man who pronounces himself "impotent," need not be dismissed to this category in the list of generators.

Unquestionably men differ in their sexual powers just as they differ in the shape of their noses or the length of their ears. There are those of such unusual vigor that they can perform the prodigious feats of which Trousseau writes in his Clinical Lectures. Such men are capable of committing rape at will upon an indefinite number of women, and it would seem that the males of certain tribes of our North American Indians possess a power of this kind. At the other extreme we find the men of a nervous and peculiarly emotional type. By these the sexual act can be performed only with those women to whom they are peculiarly susceptible. For all others they might be called impotent. A mental emotion, a word, the sight of an offensive object, the recollection of a disagreeable occurrence, instantly renders them temporarily incapable of action, even in the presence of those with whom they have sustained relations.

Between these two extremes are to be found the mass of men—among them the nervous and despairing youths who have been for long bemoaning their lost manhood. For them, a certain degree of education is requisite before the act can be properly accomplished. In their illicit approaches to women, the very novelty of their situation has unhorsed them. Unaccustomed to the act, the person, the organs, stimulated in the highest degree by anticipation of what is to follow, their seminal vesicles usually distended to the utmost with a secretion perhaps long pent-up, the prostate lies ready on the instant to discharge its burden.

The wonder is, not that they fail in such intercourse, but that they should, as they sometimes do, succeed.

Now the married state offers just the proper school for an education of this sort, and it should be recommended with confidence to every man who is capable of supporting a wife and family; who is capable of secreting and ejecting semen from the external meatus of his urethra, and who, once or twice in the week or month, arises from sleep to find his penis in a state of vigorous erection. Such a man will plead that he is sure to fail, and the proper response should be always—

"Of course you will fail. A very considerable proportion of bridegrooms fail in their first marital approaches, and you cannot expect to escape such a common lot. You will fail the first time and the second time, and possibly many times more for a few weeks. But what of it? The failure will prove, in all probability, to be a mutual one. If you have married an innocent and virtuous as well as an affectionate girl, and you ought to marry no other, she will be as ignorant of these matters as I am confident you are. The difficulties which beset your way in this direction, will none the less beset hers. And so you will go on, both of you, correcting mistake after mistake, and error after error, till the undue excitement and the novelty of the situation shall have worn away. Then will arrive a supreme moment when the act will be perfectly consummated; and so long thereafter as you are true to the one woman with whom you cohabit, your resources will never fail. The whole burden of your sexual trouble will be lifted away from your life like a dark cloud, and with it you will do well to drive away from your memory the recollection of the filth and nastiness which unfortunately pollute too often the springs of a normal adolescence."

A man, married six months or more, may give a history of masturbation and nocturnal emissions before marriage, and also complain that, since then, he has been totally unable to perform the sexual act properly. But the number of those men, in whom no positive and present cause of their trouble can be detected, is so small as to be insignificant. I remember the case of a gentleman who gave a history of this kind, and who positively declared that, during the five years of his married life his erections had

always been imperfect, and intromission instantly succeeded by ejaculation. He was well nourished, happy in his domestic relations, and not in the least worried about his condition. He had a healthy child, whose existence, he said, was a standing surprise to him. He complained of other symptoms, and for these I explored his urethra. I found a tight stricture one inch from the meatus. This I divided. During the subsequent treatment his wife conceived a second time, and he told me that he had effected natural intercourse at the date of this conception.

It may be said, in general, that the married men who complain of "impotency" are almost invariably those in whom this condition has succeeded to the previous enjoyment of their powers. But these do not belong to the class of adolescents, whom we are now describing.

I would not have you infer from what I have said, that medical and surgical treatment is not needed by many of these complainants. It is indeed essential to the judicious management of a certain proportion of cases, and I will endeavor to treat this part of the subject in a future lecture, deferring to that time a consideration of the effect upon the genital organs of the habitual use of tobacco, alcoholic stimulants, and opium.

DERMATOPHONY.—Prof. Hueter of Griefswold, has shown that we can hear with the microphone the rush of blood through the capillaries of the skin (dermatophony), the sounds of muscular contraction (myophony), of tendinous extension (tendophony), and of the vibration of long bones when percussed (osteophony.)

As the microphone is, in general, not easy of application to the skin of the body, Prof. Hueter has invented a special instrument or dermatophone, consisting of a flexible stethoscope with a thin caoutchouc membrane stretched over the end applied to the skin, and a perforated horn plug to fit and close the ear perfectly. With this instrument he has clearly proved that the capillary murmur is most clearly heard where the circulation is most vigorous. In acute inflammation of the skin, with marked inflammatory hyperæmia, the murmur is louder but deeper in tone than the normal state.—*Times and Gazette, Feb.* 15, 1879.

Original Communications.

ARTICLE II.

CYSTS OF THE BROAD LIGAMENT OF THE UTERUS. Notes of Three Cases by R. STANSBURY SUTTON, A.M., M.D., of Pittsburgh, Pa.

During the last few years I have met with three cases of cysts in the broad ligament. These cases all differed from one another in these particulars: Case I, the cyst was very large, and had frequently been tapped; Case II, the cyst was of medium size and had never before been diagnosed; Case III, the cysts were concentric, multiple and small, and, so far as my experience goes, the case is unique. Before relating these cases, I may be pardoned for making a few remarks upon the subject in general. Dr. Charles Clay seems to have been the earliest observer of these larger cysts. The general pathologist says very little about them, and as is remarked by Dr. Peaslee, the "ovariotomists in this country and in England" are those who have recognized them. Prior to 1850 Dr. Clay seems to have been about the only one who spoke of them. Now that ovariotomy is an established operation, we may expect to learn more of these cysts, which will be met with, whether we will it or not. Two of the cases I am about to report, may be put under the head of "large serous cysts of the broad ligament;" they are of slow growth and affect the general health very slowly. We are taught that after tapping they rarely fill again. In this particular my cases are at variance with the rule, as will be seen, but out of 40 cases Dr. Charles Clay cured 34 with the trocar, therefore two cases taken alone mean nothing; but if some one, collating such cases, will add these two to his number, that statistics may, after

a while, be made up, for our own country, I will feel amply repaid for my efforts to place these cases within his reach.

Case I.—Miss Frances Husack, a resident of Pittsburgh, aged 21 years, presented herself at my office July 7, 1876. Her parents were Bohemians. She was born in Pennsylvania and had, living and well, two sisters and three brothers. Until five years ago, or up to her 16th year, her health was excellent. She menstruated for the first time at 14. At 16 she became irregular, and observed, about this time, an increase in the size of her abdomen. A year after this she was tapped by Dr. John Dickson, and eight liters of clear fluid were removed. She describes the fluid as having been "clear as well water." Thirteen months later she was tapped again by the late Dr. A. G. Walter, and ten (10) liters of similar fluid were removed. Eight months later she was tapped again by Dr. Walter, and 12 liters of similar fluid were removed. On the 10th of August, 1875, she was subjected to the fourth tapping, this time by Dr. Duff; 16 liters of clear fluid were removed. It is therefore scarcely a year to-day since she was tapped. She reports a good appetite, daily action of the bowels, and the ability to sleep well.

Measurements.

Around the body at the umbilicus	106	Cm.
From ensiform cartilage to the umbilicus	23	"
From pubis to the umbilicus	27	"
From R't super. spinous process of ilium to umbilicus,	26½	"
From L't " " " " " "	27	"
Around the body, 5 Cm. above the umbilicus	104	"

Fluctuation is very distinct over the entire swelling. Change of position does not alter the boundaries of fluctuation. The abdominal walls glide readily under the hand over the anterior and lateral aspect of the growth. The epigastric veins are slightly enlarged. The umbilicus is level with the general surface. The patient is considerably emaciated. The expression of countenance is not decidedly ovarian. The uterus is retroverted, and measures in depth 8½ Cm. The following facts gained in this examination may be tabulated:

1. The patient is young, viz., 21.

2. The growth has not been rapid.

3. The tumor is large, but the general health tolerably good.

4. The abdominal veins are less enlarged than usual in great abdominal distensions.

5. Fluctuation is very distinct and continuous over the entire growth.

6. The expression of countenance is not decidedly ovarian.

July 31 (24 days since first examination), I introduced a large aspirator needle into the cyst, and through it withdrew 17 liters of fluid literally as "clear as well water." This fluid possessed high refractive power, contained no albumen, but did contain chloride of sodium. Its specific gravity was 1008. It was very apparent that the cyst was one of the broad ligament. At this tapping the cyst was not emptied, but considerable fluid was intentionally left in it. I ordered tincture ferri chloridi 1 Gm. 35 centigrams, *ter die*, and good diet. Also lithia citrate, 35 centigrams in a glass of water each morning before eating.

August 14.—At 10:30 a.m., Squibb's ether was administered by Dr. Giesking. Assisted by Dr. Rohauser, Dr. Purviance and Dr. Lemoyne, I proceeded to operate. An incision 10 Cm. long was carried through the abdominal wall in the line of the linea alba. The cyst, partially empty, was seized with a tenaculum and partly drawn through the incision. Fitch's trocar was now introduced, and the cyst rapidly emptied of 6 liters of fluid. It was now carefully drawn out, and found to be a cyst of the left broad ligament. Its pedicle was very short and very broad. The ovary adherent to the cyst was healthy. A needle, threaded with four strands of carbolized silk, was now carried through the pedicle about at its center. The needle was cut away and each half of the pedicle was firmly tied with two strands of the ligature. The pedicle was now severed 2½ Cm. beyond the ligature, and the cyst removed. After sponging out the belly, the ligatures were cut off close to the knots and the pedicle dropped in. The wound in the abdominal wall was now closed with carbolized silk sutures and adhesive straps; a bandage being adjusted, the patient was put to bed; pulse 31. Pain being complained of, an injection of 1 centigram of morphia was given subcutaneously, a jug of hot water was placed at the feet, and milk and lime

water ordered to satisfy either thirst or hunger. At 10 p. m., temperature 38.4, pulse 41.2.

Aug. 15, 10 p.m.—Temperature 38.3, pulse 41.2. Removed two stitches from the wound.

Aug. 16, 10 p.m.—Temperature 37.9, pulse 40. Removed two stitches from the wound.

Aug. 17, 10 p.m.—Temperature 38.2, pulse 46.6. Removed the last stitch; wound closed.

Aug. 18, 10 p.m.—Temperature 38, pulse 42. Is eating well; ordered quinia sulphate 35 centigrams and tincture opii gtt. x per rectum daily as a tonic and to avoid tympany.

Aug. 19, 10 p.m.—Temperature 38.2, pulse 36.7. Taking also to-day a dessert spoonful of brandy at meal time.

Aug. 20, 10 p.m.—Temperature 37.5, pulse 37.8.

Aug. 21, 10 p.m.—Temperature 37.5, pulse 37.8. Complains of frequent desire to pass fæces, without any result. On passing a finger into the rectum, it was found packed. The pack was broken up, and with the aid of injections of soap suds the rectum was emptied of a large quantity of fæcal matter.

Aug. 22.—Temperature 37.3, pulse 28.9.

Aug. 24—Temperature 37, pulse 26.7. Sitting up in bed.

Aug. 30—Temperature 37, pulse 26.7. Sitting up, out of bed; appetite good.

Sept. 2.—Slight intercostal neuralgia; ordered a flannel jacket.

Sept. 3, .—Neuralgia gone.

Sept. 4.—Patient discharged.

During the first four days after the operation, the catheter was used every six hours by Dr. Rohauser, who lived but a few doors from the patient, and whom I retained in the case with me. At this date, May 25, 1878, this patient is now a healthy married woman.

Case II.—On the 17th of March, 1877, I was requested by my friend, Dr. Joseph Dickson, of this city, to see with him a Mrs. ——, from an adjoining county. She was a thin, tall woman of a highly nervous temperament. She was 34 years of age, had married at 15, and enjoyed fair health for about ten years afterwards. She had never borne children, which fact was possibly due to the existence, until recently, of a long, conical

cervix, with a narrow canal. Her menstruation had always been painful. She had consulted many physicians during the last nine years. Her symptoms were peculiar. She was painfully nervous and irritable. As she stood before us, she placed her hands upon the lateral walls of the abdomen, and by means of pressure, first on one side, then upon the other, produced a rumbling, bubbling noise in the intestines, which was a surprise to us both. Some time before, she said, the neck of the womb had protruded between the labia and had been amputed. Since the operation she had menstruated more comfortably, but her general nervous condition was no better, and she had threatened to destroy herself. We decided to carefully examine the abdominal and pelvic viscera. Percussion was first in order. Clear sounds were elicited all along the entire course of the colon, or more properly throughout the right inguinal, right lumbar, right hypogastric, epigastric, left hypogastric, left lumbar, and nearly all of the left inguinal and umbilical regions.

At a point 2½ Ctm. below the umbilicus, a dull sound was found; this dullness extended down to the pubes, and corresponded with the umbilical region in width, overlapping the line a little on the left side. Indistinct fluctuation was evident. The region occupied is that which a full bladder would fill. A catheter passed proved the bladder to be empty, and the catheter could be felt through the anterior wall of the vagina as high as the neck of the uterus. Two fingers passed into the vagina, and the other hand pressed down above the pubic symphysis, fairly caught the cyst, and gave a tolerably accurate idea of its size.

The uterus was pressed back upon the rectum, and measured 6 Ctm. with the sound. We concluded that the patient had a cyst either of the broad ligament or Fallopian tube, and I requested Dr. Dickson to aspirate it. The belly was in appearance perfectly normal.

Returning to the room in which the patient lay, Dr. Dickson thrust an aspirator needle into the cyst, and drew off 1 liter, 24 C. C. of clear fluid, of a low specific gravity, free from albumen but rich in chloride of sodium, and possessing high refractive power.

I left the patient to the Doctor, since which time I have not examined her. On inquiry, Dr. Dickson tells me that the cyst refilled, and he has tapped it once since. The nervous symptoms continue.

Case III.—On Dec. 7, 1877, I saw, in consultation with Dr. Thomas Mahon, of Allegheny City, Pa., Miss Lizzie M., aged 15 years, sent to him by Dr. Hughes, of Blairsville, Pa. Her face was that of one apparently much older. She had never menstruated. Eighteen months ago she was perfectly well. Soon after this date she observed her abdomen growing larger, and also suffered some pain in the left side. Six months later her abdomen had become very large. Passing along a pathway in the yard, *she fell over a water-bucket.* She was not apparently injured. The following day she observed *a change in her shape*, and the swelling of her abdomen *rapidly disappeared.* She says *no fluid* escaped by the *vagina.* About three months after this the abdomen again began to enlarge, and at the end of nine months, viz., in October, 1877, Dr. Hughes tapped her of many liters of fluid, greenish in color, thick and heavy. Two months later, viz., Dec. 2, 1877, he again tapped her of 19 liters 200 C. C. of similar fluid. Such is the history given by herself and her father, who accompanies her. It is, therefore, only five days since she was tapped. This fluid was not examined with the microscope. By palpation I detect considerable fluid in the belly at this time; its presence is confirmed by gravity carrying it about on change of position, dullness on percussion locating it. But between two fingers in the vagina and the hand in the left inguinal region, I feel what I take for a cyst nearly empty; it is soft and elastic. The upper hand detects a round body, which I suspect to be a solid body in it. The patient is so restless, however, that we desist. Relying upon the history and what we have found, we conclude that we have to deal with an ovarian cyst. Three weeks after this I met Dr. Hughes in Blairsville, and visited this patient with him. She was very large, and I wanted some of the fluid. Dr. Hughes tapped her of 9 liters 500 C. C., leaving a great deal in her. This fluid was greenish in color, sticky and heavy. It contained albumen. Specific gravity 1015. At this visit I did not *re-examine the case*—in my opinion, a

great mistake. I brought home a bottle of the fluid, and examined it with the microscope. It contained epithelium and a granular cell which I took to be the ovarian cell. I sent to each of two good microscopists in the city a specimen of the fluid. They were ignorant of the origin of the fluid. After examining it they pronounced it to be fluid from an ovarian cyst. This impartial and independent confirmation of our diagnosis put my mind at rest, and at the request of Drs. Hughes and Mahon I decided to remove the cyst when they considered the patient ready.

On the 15th of January, 1878, at the patient's home, I met Dr. Hughes and a number of medical gentlemen of Blairsville.

I made an opening in the linea alba 6 Ctm. long. No ovarian cyst was to be seen. An enormous quantity of fluid was removed from the belly. The small intestines were glued in a lump, and lay high up in the abdomen. The vessels of the peritoneum were congested; the ovaries and uterus were healthy, but between the layer of the left broad ligament there was something filling up the pelvis. I cleaned the fluid out of abdomen, announced a mistake in diagnosis, and closed the wound. Four days afterwards I received a postal from Dr. Hughes saying the patient was dead, and that he had removed at the post-mortem the uterus and ovaries.

Two days afterwards I examined the uterus, broad ligaments, etc., with Dr. Hughes and several of the physicians of Blairsville. The uterus and both ovaries were healthy, but between the layers of the left broad ligament there was a soft elastic mass as large as a California or Florida orange. The entire mass lay below or under the ovary and tube, and was covered by the serous layers of the broad ligament. Between the mass and the uterus there was 1¼ Cm. of the ligament unsplit by the mass. In the serous covering was found a small opening communicating with the mass; out of this opening oozed a glassy, amber colored fluid, when the specimen was pressed upon. The serous covering was now slit open, revealing a mass of hydatiform cysts, varying in size from a pea to a shell-bark hickory nut. Many of these cysts were concentric, their walls were transparent and exceedingly thin. The contents of the cysts was a fluid heavier

than water, in color resembling currant jelly. Microscopic examination failed to show any hooklets. The case was one of chronic peritonitis, complicated by this mass of cysts. Did this mass of cysts cause the peritonitis? On account of professional engagements, Dr. Mahon was not present at the operation.

ARTICLE III.

AN IMPROVED VARIX CLASP FOR THE RADICAL CURE OF VARICOCELE.

By T. W. WILLIAMS, M.D., Milwaukee, Wis.

Of the Disease.—Varicocle, as is well known, depends upon an enlargement, or varicose condition of the veins which form a large part of the spermatic cord. It is sometimes situated on the right side, but generally on the left, owing, it has been stated, to the absence of a valve where the left vein enters the emulgent, which subjects it to greater pressure from the superincumbent column of blood. Whatever may be the cause, the fact is that the walls of these veins do give way, become relaxed, as it were, and distended, bulging out in places into little pouches, giving the vessel, when full of blood a knotty appearance. The whole vein, in old cases, is dilated, enlarged, tortuous, cordy and knotty. The disease is one very prevalent, and although it has been known to exist for years without any serious results, my observation has convinced me that these are exceptional cases, and that in the majority of instances the disease results in impotency and wasting of the testicle, and sooner or later impairs the general health by constant nervous irritation, inducing dyspepsia, dragging sensations in the groins, lumbago, or pain in the back, and a general depression of the system, despondency, gloomy forebodings, and hypochondria.

Of the Treatment.—We cannot, by any means known to medicine, restore these veins to their normal healthy condition; but we can do the next best thing, which is to occlude them, that is, cut off the circulation in them. The palliative treatment, which consists in cold bathing, counter irritants, and wearing a

suspensory bandage, seldom affords more than temporary relief. A permanent and radical cure is effected only by the occlusion of the veins. The barbarous practice of removing part of the scrotum, as recommended by Sir Astley Cooper; including the veins and half of the scrotum in a ligature; exposing the veins and tying them, wearing a lever truss, which was worse than useless, etc., etc., were formerly resorted to. Ricord was the first to improve on this treatment, by substituting the sub-cutaneous ligature. Dr. Gross still further simplified and improved the operation by using only one ligature. This operation for varicocele, although considered perfectly safe, and undoubtedly effective of a radical cure, is not without objection. To be performed by a competent surgeon, its cost (no small item to numerous patients), is considerable, while the loss of time, occasioned by the patient being confined to his room two or three weeks, is both painful and tedious. The operation by the ligature is also excruciatingly painful. "Pain is a great evil," as Dr. Gross says, and if we can accomplish the same end without it, we thereby gain a material advantage.

Many cases of varicocele are caused by a relaxed, pendulous condition of the scrotum, which does not support the testicles, but allows them to drag on the cord. In early stages of the disease, I sometimes perform an operation for retrenching the scrotum, by means of an *elastic ligature* which shortens it sufficiently to cause it to support and sustain the testicle. I have performed this operation several times with the best results. I have never seen the operation performed by any one else, and have never seen it described or recommended. I will, therefore, briefly describe my method of operating, which is very simple. I gather up sufficient of the relaxed scrotal tissue on the affected side to shorten the sac, so as to cause it to lift the testicle and support it sufficiently to prevent any tension of, or dragging on the cord. Around this superfluous portion I slip an elastic ligature sufficiently strong to compress it and arrest the circulation in the vessels of the part. I then pass a small needle, threaded with fine silver wire, through the occluded portion just *below* the ligature, and bring it through the scrotum again just *above* it, forming a tight loop around the ligature, secured by twisting the

ends of the wire together. I then leave it to cut through and slough off, which it does with very little swelling.

The operation is not attended by any considerable pain, and if it is performed in the early stages all further trouble is avoided. Even after the occlusion of the cord by the ligature or clasp, many patients are obliged to wear a suspensory, and the further operation of shortening of the scrotum is advisable; as also in relaxed conditions of the sac, even where no disease exists.

Operation with the Varix Clasp.—But the operation which I consider preferable to all others for the radical cure of varicocele, is that of occlusion of the diseased veins by means of an improved varix clasp of my own. I do not claim originality for this operation, and am aware that a similar operation was recommended many years ago, but by whom I have not the data at hand at this moment to say. I think an instrument for this purpose is figured in an old edition of Pancoast's Surgery, published from sixteen to twenty years ago. I do not think, however, the operation ever received much favor, and have never seen it referred to in any medical literature on the subject which has come under my own observation; and when I sent one of my instruments to Dr. S. D. Gross, some fifteen years ago, it seemed to strike him as a good idea, and he wrote me that he would try it upon the first favorable case which he should have; but I have never heard anything from him on the subject since.

The operation has been so successful in my hands during the last fifteen years, that I have concluded to bring it to the notice of the profession. I have had considerable experience with the affection during the last fifteen years, having operated upon about 200 cases with a successful result in 98 per cent. In no case has any fatality attended the operation, and in the three or four cases in which it has failed, I attribute the failure to the slipping of the cord. As the clasp was originally constructed, as shown in the engraving, the pin at the end of the blade was simply a blunt knob. Its object was to prevent the cord from slipping out of the blades upon the application of pressure by the thumb-screw. In the improved instrument, as now made by Messrs. Tiemann & Co., of 67 Chatham St., N. Y., this pin is made longer

and sharper, so as to pass *entirely through* the scrotum, thus effectually preventing this accident.

The clasp is made of hard rubber, beveled from the center of the blades outward; the blades are 5 Cm. long, from the point to the hinge, and are approximated by a thumb-screw. I consider the clasp a great improvement upon the old method of operating. It acts on the principle of the ligature, without the pain and inconvenience attending that operation. The result is the same as if a skillful ligation had been performed, and is obtained with much less pain and loss of time. It possesses other advantages which the ligature does not, viz.: the slight inflammation and ulceration of the external skin which it produces, causes the scrotum, which is always relaxed, to contract and become shortened; while it is perfectly free from the danger of inflammation and peritonitis, which sometimes follow the use of the ligature. Owing to the *rapidity of the cure*, and *freedom from internal suppuration*, the dangers and inconvenience of the ligature are avoided. The function of the testicle remains unimpaired, which is not always the case after other operations.

Mode of Applying the Clasp.—The application of the instrument is so simple and easy that the physician will have no difficulty in accomplishing it. The spermatic artery and vas deferens should not be included in the clasp, as our dealings are entirely with the veins. The artery and vas deferens can be easily distinguished by the touch when taken between the thumb and forefinger. They are united, and form one cord, which is about the size of a quill, and has a hard cordy feel, totally different from the soft vascular feel of the veins, and the pulsation of the artery can be distinguished as a rule. After separating the cord from the veins with the thumb and forefinger of the left hand, by pushing it over towards the other testicle, let the patient lie down so as to empty the veins (still keeping them separated), then apply the clasp so as to include and compress the veins about an inch

Dr. Williams' Varix Clasp, half its actual size.

above the testicle, turning the thumb-screw until the veins are completely strangulated. Should the blades of the clasp when closed leave too much room between them to compress the veins sufficiently, as may happen when the veins are thin, one or more thicknesses of chamois skin or rubber may be put between the blade and the skin. This is rarely necessary, however, as the blades of the clasp approach within one-sixteen of an inch of each other. The pin at the end of one blade passes *completely* through the scrotum, between the vas deferens and artery on one side and the enlarged veins on the other. This is necessary to prevent the veins from slipping out of the clasp when the pressure is applied. The pain of this operation is much slighter than one would suppose, and lasts only a few minutes, after which the parts compressed become deadened.

The After Treatment.—By leaving the clasp on five days the veins become clogged up with coagulated lymph, and are thus permanently closed, so that when the instrument is removed, the circulation is not re-established. The instrument usually causes more or less dull aching pain for a few hours, and the pressure on the external skin causes it to become sore, but it heals up in a short time after the removal of the clasp. The lower part of the vein, at the bottom of the scrotum, becomes more or less swollen and distended; the blood, however, is in time re-absorbed, and, if necessary, the swelling may be poulticed with ground flaxseed, or bread and milk, to hasten its departure, after the removal of the clasp. Four or five days is sufficient to effect a cure. A bandage of some kind should be worn to prevent the clothes rubbing the clasp off; and after its removal a suspensory bandage should be worn until all swelling and tenderness subside. The diet should be light, and the recumbent posture maintained as much as possible while wearing the clasp. The patient may, however, move about the room, and go down and up stairs to his meals or to the closet. In a month after removing the clasp, it can be seen whether the cure is perfect or not; in some cases, from various causes, it may be necessary to make a second application of the instrument; but this will be very rare, and then will be owing to the first application not including all the veins. A radical cure may be relied on in all cases.

The cut represents the varix clasp as originally made. The only alteration I have made in it, was to make it a little heavier and stronger, and have the pin so constructed as to pass entirely through the scrotum. They may be obtained from Messrs. Tiemann & Co., made after my own model. They are known as "Williams' Varix Clasps," but are not a *patented* or proprietary article.

ARTICLE IV.

A CASE OF EXTRA UTERINE PREGNANCY. Extract from a paper read before the Fox River Valley Medical Association, at Aurora, Ill., January 6, 1879. By ABNER HARD, M.D.

GENTLEMEN:—For presenting to your consideration the details of a case of extra uterine pregnancy which lately occurred in my practice, I think I need make no apology. It is an occurrence so rare that few country practitioners, and in fact few accoucheurs, have an opportunity to observe it.

Some years since, Doctor Allaire, a member of this society, had such an experience in his practice, where a German woman carried an extra-uterine fœtus. When the doctor was first summoned, there was a tumor in the side, whose sac inclosed fœtal bones, many of which were perfect, all the soft parts of the fœtus having been absorbed. The woman lived to have other children, and is living at this time, as we believe. The older members of the society will recollect the fact.

A case which came under the care of Drs. Winslow and Gillett, of this place, was diagnosticated as extra-uterine pregnancy, but, a post-mortem examination being refused them, they had no opportunity to verify their diagnosis. Believing so rare an occurrence should be put on record, I report my case.

Mrs. C., aged 36 years, had been married 16 years, but did not become pregnant until last spring. She was naturally very delicate, sensitive and nervous. On the 13th of June, 1878, I was called to see her, when suffering from uterine hæmorrhage. It was the time for her menses, but for several months she had

been irregular in that particular, and I looked upon this as menorrhagia, though she had some symptoms of pregnancy, which she could not believe existed, and her pain simulated that of abortion. This condition yielded to treatment, and in a few days she was up again. July 9th, I was again summoned to attend her, when she complained as before, but also had congestion of the lungs, and unusual and constant pain in the abdomen. Her sufferings were excruciating. Relief was obtained only by the use of strong anodynes. At this time I became satisfied she was pregnant, and feared placenta prævia and an abortion, which the patient was very desirous of avoiding. She recovered and was about the house until July 28th, when I was again called, and found great tenderness over the abdomen, considerable nausea and dyspepsia. Very little food could be tolerated. She could get no sleep lying, and had to be kept in a semi-recumbent position. Careful examination failed to throw any additional light upon the case. The fœtal heart could not be heard, but the other usual signs of pregnancy were present. From this time until her death she was unable to go about the house. As the abdomen enlarged, the difficulty of breathing became great. Every movement of the diaphragm in breathing gave pain, and coughing was very distressing. The motions of the fœtus were feeble, but gave great pain; and added to her discomfort was incontinence of urine. Every month she menstruated; sometimes the flow was small, but accompanied with unusual pain. This condition continued increasing in severity until (as we reckoned) about the sixth month of gestation, from which time she felt no motion of the fœtus, and she grew worse more rapidly. Although there was no general peritonitis, the abdomen was so tender she could hardly bear light bed-clothing, and every attempt at digital examination *per vaginam* was resisted as unbearable. During most of the time her mind was greatly disturbed, not being fully rational. About ten days before her death there was an offensive discharge from the vagina, the odor resembling decomposed animal matter. Believing the fœtus to be dead and decomposing, and that death would soon ensue unless relieved of the dead fœtus, assisted by Dr. L. A. Winslow, on the 18th of November we gave her ether and made an examination which

revealed the os uteri lying above the pubis and to the right of the median line, which could with difficulty be reached. She rallied from the effects of the examination and etherization, but continued to sink, and died Nov. 20th.

A post-mortem examination made seventeen hours after death, in presence of Drs. Robbins, Higgins, Grant, Murphy and Winslow, revealed a case of extra uterine pregnancy. The fœtus was plump and apparently well nourished up to the time of its death at about the sixth month. Decomposition had so far advanced that the skin came off very readily. Impregnation had taken place in the right ovary, from which the sac or membrane had grown which contained the child and secundines. Adhesions were very firm between the sac and peritoneum covering the intestines, and the wall of the sac was so fragile it was readily broken or torn by the finger. The liquor amnii was semi-sanguineous and offensive. The placenta was of natural size, partly decomposed and attached to the upper part of the sac. The uterus was small — not larger than a man's fist — and found lying above the pubis, to the right of the median line and in front of the fœtal envelope. Its mucous membrane was covered with a caseous or cheesy deposit about 0.2 Cm. in thickness, which was readily removed with the scalpel. The fallopian tubes appeared natural, the one leading to the right ovary being perfect its entire length, and as long as the left tube, showing, as I think, that this was a case of ovarian and not tubal pregnancy.

ARTICLE V.

THE CURE OF HÆMORRHOIDS BY THE HYPODERMIC SYRINGE.

By EDMUND ANDREWS, A.M., M.D., Prof. of Surgery in the Chicago Medical College.

In a former number of this journal, I published the secret method of certain itinerant "Pile Doctors," and asked for information from all physicians who had any knowledge of the practical results of the treatment. This request, supplemented by other inquiries, has brought me responses from about 300

physicians, and given me more or less knowledge of the results of over 3,300 cases treated by the new method. From the material thus collected I am able to present the following history:

In the year 1871, there lived in the village of Clinton, Ill., a physician named Mitchell. His practice being small, he employed his superabundant leisure in planning a new treatment for hæmorrhoids. He was a good thinker, and soon conceived the idea of charging a hypodermic syringe with equal parts of carbolic acid and olive oil, and injecting the contents into the hæmorrhoidal tumors. He also devised another and totally different plan, which was to take two large needles with triangular points, like those used by saddlers, and then to pick the piles to pieces little by little with the needles. Mitchell himself is said to prefer the needle operation, and several others have adopted it from him, but the plan of injections has proved by far the most popular with others, and has recruited, in a quiet way, a surprising number of operators. The secret was sold from man to man, and the price and enthusiasm rose simultaneously. "State and county rights" to practice it, were vended at high rates, reaching in one instance the sum of $3,000. Regular physicians abandoned their practice, and even mortgaged their property for money with which to buy the secret, and set themselves up as itinerants, while ignorant laymen joined in the rush until they filled the whole West with their clamor, and at last whitened the sands of the Pacific shores with their hand-bills.

The chief managers of the business settle in the larger towns in the winter, where they advertise and practice, but as Spring advances to the time when the wild geese begin to fly, they feel the migratory instinct, and go from place to place, selling the secret to all who will buy it, and operating meanwhile on the people of the farms and villages. In this way they have treated more than 10,000 patients in the States west of the Alleghany mountains. A secret so extensively sold, always gets out. Three years ago I discovered and published it, thus putting a check on the business of selling, and induced large numbers of the regular profession to try the plan among their patients. These physicians have furnished me my best infor-

mation, but I also opened communication with the principal itinerants themselves, and induced several of them to come out frankly and tell what they knew, and by checking one statement against another, was able to sift out pretty well the few attempts at deception.

Mitchell's original plans have excited widely extended thought and experimentation among his followers, so that his two methods have branched out into numerous varieties. The original injection seems to have consisted of equal parts of crystallized carbolic acid and olive oil. The operator exposes the piles to view, and smears the anus with an ointment to prevent smarting in case the fluid should chance to drop; he then takes a sharp-pointed hypodermic syringe, charged with the carbolized liquid, and slowly throws a few drops into one of the piles. The pipe is left in the puncture a few moments to prevent the fluid from running out, and to allow it to become fixed in the tissue. The pile turns white, and in the most successful cases withers away without pain, suppuration or sloughing. Only one pile is treated at a time, and about a week is allowed between the sessions, until all are cured. The itinerants often advertise their method as "painless," but as a matter of fact only about one patient in four gets anything like exemption from pain. Most of them suffer a sharp temporary smarting, and a few have a terrible and prolonged agony. The majority are cured, however, without interrupting their business.

The original plan has sprouted into numerous varieties. Instead of using olive oil as the excipient, many use glycerine. Then every operator has his favorite degree of strength. Several claim that the stronger the fluid the better it is, and actually inject crystals of carbolic acid melted by heat, while others use mixtures varying in strength all the way down the scale, until we find Dr. Weir, of New York, experimenting with one part of acid to 20 or 30 parts of the solvent. The dose injected varies in like manner. Some advocate great caution, and only put in from one to three drops, while others cram the pile with a syringe full, and seek to make it suppurate or slough. I find two men using creosote instead of

carbolic acid, and several add anodynes, such as morphine, chloral, or iodoform. Ergotine is also a favorite injection, and a great number of mixed formulæ have been imparted to me, some of them containing five of six ingredients. Mr. Colles, of Dublin, injects muriated tincture of iron. Dr. Hill, of Bloomington, Ill., and Dr. Drake, of Hastings, Mich., use the iron persulphate, while others have tried tannin, chromic acid, tincture of iodine, etc. One itinerant, who writes in a straightforward, manly tone, says that he has experimented on almost every coagulating agent in the vegetable and mineral kingdoms. His preference is for the strongest carbolic acid. He adds the following remarks: "The difficulty with all remedies except carbolic acid is the suppuration being limited to a small portion of the tumor, or, like the preparations of iron, causing it to swell and become very painful. Carbolic acid is, so to speak, used up in cooking the blood throughout the entire tumor. The appearance of the pile in from five to twenty seconds shows such to be the fact. Suppuration takes place in three or four days, with sloughing. No danger of hæmorrhage."

The results of these various methods of treatment, may be summed up as follows: In the first place the needle operation has never become a favorite. I can learn of only five persons who make much use of it. The following case was probably treated in that way. The patient, a plethoric man of 45 years, went to a quack in Chicago, and as the result, a varicose hæmorrhoidal vein was widely opened. He says the blood gushed out freely, but after some trouble was arrested through the application of means not clearly understood by him. He then returned home in great agony, and sent for his family physician, who in turn called me in council. The family physician took off sundry cloths and compresses, and found a large opening in a vein plugged with a vial cork. The quack, I presume, tore open the thin walls of a dilated vein, and being driven to his wits' end by the gush of blood, finally concluded to cork up his patient like a demijohn.

My informants agree that the injection method seldom fails to cure the disease, but they report some serious disasters. The writers know of about 3,304 cases treated in their vicinities by

these methods, and though they cannot always give exact numbers and details, yet the circumstances are such that a case of rapid death from the treatment, could not be concealed, though minor troubles, such as pain, sloughing, etc., might frequently escape their notice. It is probably, therefore, that the list of deaths is pretty complete, while the figures giving the minor accidents, are too small.

LIST OF ACCIDENTS.

Deaths	9
Embolism of the liver (suspected)	8
Very dangerous hæmorrhage	5
Less " "	5
Carbolic acid poisoning (recovered	1
Sloughing (generally but not always confined to the piles)	23
Abcess (of the liver)	1
Severe inflammation	10
Violent pain	83
Stricture of the rectum	2
Permanent impotence	1
Long sickness (2 weeks to 6 months)	6
Relapsed	7
Failed of cure of piles	11
Sundry other accidents	12
	184

Cases of sloughing and suppuration of the piles, are innumerable. Some itinerants use strong injections with the express purpose of producing these results, deeming that the plan of causing them to atrophy without suppuration, lacks certainty and permanence.

The list shows that while the deaths are so few that the risk is no greater than in other modes of treatment, yet the minor accidents are very numerous. The imperfection of the reports renders a thorough study of the accidents impossible, but the following informmation has been gleaned. One of the deaths was caused by inflammation followed by immense abscesses, erysipelas and pyæmia. The patient died on the fifth day.

Another death apparently resulted from embolism of the liver. That viscus nearly ceased its function; the stools were light-colored and scanty, the skin yellow, and all the lymphatic glands of the groin, axillæ, and neck became enlarged. A full dose of calomel always brought temporary improvement, but no permanent benefit. The patient lingered along, and died unrelieved, about one hundred days after the operation. The next fatal case was that of a man 84 years of age. The person who injected the pile, said it was "very large and very deeply seated." It was suspected that he mistook the enlarged prostate for a hæmorrhoid. Be that as it may, the patient was attacked with violent pain and retention of urine, and though relieved by the catheter, died the third day. There is no proof however, that the prostate was injected, nor that it would be fatal if it were.

The fourth death was also attributed to injecting the prostate, but no symptoms are given.

The five remaining deaths are so vaguely reported, that I am unable to give any particulars about them. It is possible that three of the reports refer to the same patient, and ought to be counted as one, in which case the whole number of deaths is only seven. This number of fatal results in 3,300 cases, treated often in the most reckless and ignorant manner, is certainly not large, and tends to show that the injection method is as safe as any other, so far as life is concerned.

The same relative immunity appears respecting hæmorrhage. Five dangerous cases of it are reported, but in most, if not all of them, it occurred from the foolhardy practice of allowing the patient to take long rides and walks when he should have been in bed; but even with all this imprudence the hæmorrhagic cases are fewer than occur after the use of the clamp and the ligature. Allingham reports more instances of hæmorrhage after his favorite operation, the ligature, than I can find among all these cases of injection.

The chief objection of the profession to this operation, has been the fear of embolism. The two lower pairs of hæmorrhoidal veins send their blood by the route of the internal iliacs to the heart, but they are small, while the upper pair is much larger, and carries the great mass of the blood of the hæmorrhoidal

plexus to the liver, hence we should expect that embolism, if it occurred at all, would be of the latter organ. The facts agree with the indications of the anatomy, for not a single case is reported of a sudden death, such as would proceed from clots swept to the heart and lungs, but there are eight instances of suspected embolism of the liver; only one of them died, and there was no post-mortem examination, so that possible proof is wanting.

The first is the fatal case of liver trouble already described. The second was marked by an abscess of the liver, but the patient recovered. In the third case the patient was attacked one hour after the injection with severe pain in the liver. After some time the pain was relieved, and no further trouble followed, but the physician feared to repeat the injection.

In the remaining cases it is simply reported to me that the patients after operation, were attacked with disease of the liver, but did not die; no particulars were given. It is probable that in a portion of the cases the liver disease pre-existed, and was the cause of the piles and not the consequence of the operation. On the whole, there does not appear to be any decided danger of embolism, if the case is carefully handled. I may mention here, that Dr. Whitmire of Metamore, Ill., practices tamponing the upper part of the rectum for 24 hours, to prevent any emboli from moving in that direction.

Sloughing and suppuration of the piles generally follows large and concentrated injections, but not the small and dilute ones. A few cases only of extensive abscesses have occurred.

The most frequent of all accidents is the occurrence of severe pain. The verge of the anus is extremely sensitive, and injections put in near that circle are liable to produce fearful distress, but above the verge, the sensibility rapidly diminishes, so that much less suffering is entailed by the injection of internal piles. In about one-fourth of the patients the pain is very slight. Dr. Weir of New York injected two series of patients, one with strong, and the other with weak carbolized solutions, using in the latter only one part of carbolic acid to ten, twenty or thirty of the excipient. He found that the pain and the abscesses followed

the use of the strong injections, but were escaped when weaker ones were imployed.

The remaining accidents in the list are not peculiar to this operation, nor greater in number than occur in other methods. The operation was a new one, and its conditions of safety were unknown. When we consider that many of the operators were ignorant blockheads, with no qualifications for the business except a bottle of carbolic acid and a hypodermic syringe, and with no idea of efficiency but to distend the hæmorrhoidal plexus, with all the liquid caustic they could get into it, we shall not be surprised at discovering a few deaths and a number of minor accidents. Had the method itself not been an unusually safe one, they would certainly have slaughtered their scores of victims, for the difference is world-wide between their ignorant injecting, and cautious, scientific surgery. If the following rules be observed I believe that the method of treatment by hypodermic injection will be less painful than any other, and equally safe.

1. Inject only internal piles.

2. Use diluted forms of the remedy at first and stronger ones only when these fail.

3. Treat one pile at a time, and allow from four to ten days between the operations.

4. Inject from one to six drops, having smeared the membranes with cosmoline to guard against dripping. Inject very slowly and keep the pipe in place a few moments to allow the fluid to become fixed in the tissues.

5. Confine the patient to bed the first day, and also subsequently if any severe symptoms appear. Prohibit any but very moderate exercise during the treatment.

Under all treatments as well as when left without treatment, piles are subject to possible hæmorrhage. Allingham gives the following method of applying the tampon where the bleeding vessel cannot be found promptly, aud controlled by other means. He takes a good-sized sponge and fastens a strong double string through its center. (He prefers a bell-shaped sponge inserted with the open end downward.) Having pushed the sponge up the rectum some inches beyond the bleeding point, he fills the parts below with cotton dusted with powdered alum or persulphate

of iron, and ties a stick across the finished tampon with the double string. By turning the stick like the handle of a gimlet, he twists and tightens the string, forcing the tampon firmly up against the sponge and causing it to spread laterally and compress the bleeding vessels. He advises the insertion of a large catheter with the tampon to give exit to the flatus. By the help of opiates the tampon is often tolerated several days.

My final conclusion is that the wild itinerants of the prairies have really made a valuable contribution to scientific knowledge, and that the cautious injection of hæmorrhoids with carbolized solutions will remain as one of the permanent operations of surgery.

The number of physicians who have contributed to this investigation is so large, that it is impossible to give separate credit to each one, but I return them collectively my thanks, and especially to Dr. J. Bussy, of Raub, Ind., who was kind enough to write to over thirty medical men in my behalf.

The literature of this subject is very scanty, and is mostly covered by the following references:

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ARTICLE VI.

A RÉSUMÉ OF CASES TREATED ACCORDING TO LISTER'S ANTISEPTIC METHOD IN COOK COUNTY HOSPITAL.

By A. GOLDSPOHN, M.D., formerly House Surgeon.

This system of surgery was introduced in Chicago, and in this hospital during March, 1878, by Dr. Edwin Powell, who had observed its use at length in the hands of its author, Joseph Lister, at Kings College Hospital, London.

The following cases are such as occurred in a certain length of time and are taken without selection. The first nine were in care of Dr. Edwin Powell, the next two in care of Dr. E. W. Lee and the last four belonged to Prof. Moses Gunn.

Case 1.—P. W., æt. 39. Dry gangrene of index finger; amputation through the continuity of first phalanx. Was redressed once. Union by first intention was perfect, and only a little serous discharge was found on the dressing.

Case 2.—F. W., æt. 18. Abscess beneath the palmar fascia of the hand. Was lanced and considerable inspissated pus evacuated. The cavity was rendered aseptic by thorough washing with a 20 per cent. solution of carbolic acid, and dressed under the spray with the antiseptic gauze. It was redressed only a few times. The wound healed not so rapidly, but kindly and without suppuration.

(In the next case, it will be observed, the chances for infection were given so long before the Lister dressing was applied that it was scarcely any fair test).

Case 3.—C. K., æt 35. A compound fracture of the skull with removal of pieces from both tables at the bottom of a gaping scalp wound. A triangular excavated wound of about 15 square centimeters in area, in the right supra-clavicular region, showing the pulsations of the sub-clavian artery plainly. Also, amputation of the little, ring and middle fingers of one hand, with their metacarpal bones at and near the carpo-metacarpal joints. The surface open with no flaps. Was admitted into the hospital in this condition, 24 hours after receipt of injuries. The wounds were dressed for nine days with boracic acid, i.e., crystals and solution on lint. The hand then looked well. During this time the temperature ranged from 37 4-5° C. to 39½° C. On the 10th day the antiseptic gauze was applied to the head and the hand, and was renewed on the 11th, 12th, 13th and 14th days. The patient's course continued favorable until the 13th day, when loss of appetite, thirst and chilly sensations appeared. Subsequently severe chills occurred irregularly; the temperature rose at different times to over 40 3-5° C.; the wounds which now bore simple dressings, began to assume a shriveled appearance; and the patient failed rapidly and died on the 17th day.

Case 4.—J. C., æt 42. Amputation of finger, done and dressed under the carbolized spray. The dressing was renewed on the 3d day, when a little thin, reddish discharge was noticed, but no bad odor. Again, on the 12th day, the stump was substantially healed, excepting a little superficial granulating surface; but on the 22d day a collection of pus was found beneath the previously united flaps.

Case 5.—J. F., æt 22. Resection of elbow after destructive inflammation of the joint, following gunshot injury. A longitudinal incision at least 12 centimeters in length, was made on the dorsal aspect of the joint. The articular surfaces being destroyed, the adjoining ends of the humerus, radius and ulna were removed. The ball was found lodging in the greater sigmoid notch. No ligatures were required. A drainage tube was inserted and the wound closed with carbolized silk sutures. The operation was performed and the regular Lister dressing applied carefully under the spray. With this the arm was then adjusted upon an angular anterior splint at an angle of 45°. A small

amount of anodyne was needed just after the operation, but subsequently the patient was entirely comfortable and ate three good meals daily. On the 3d day, the wound was redressed the first time. Immediate union was in progress nearly everywhere. Some dark red and watery discharge was found on the dressing, but the odor was very good. Union by first intention did occur in this case in every portion except one fistulous opening where the drainage tube had been. The wound was redressed in all five times, and at intervals of four and five days. At no time after the operation in this case, was there any marked general disturbance. The temperature ranged between 36 4-5° and 37 2-5° C., although on the evening of the 2d, 6th and 7th days, after some excitement from visitors, it was 37 3-5° C. During the whole time the patient who previously looked pale and a little emaciated, gained perceptibly in nutrition during the Lister régime. When the wound was healed, Dr. Powell had the patient anæsthetized again, and then put the forearm through its motions. These the patient was instructed to maintain, and several months later he reappeared to exhibit the arm with flexion and extension at the elbow nearly perfect.

Case 6.—H. S. H., æt 40. Scirrhus of female breast, amputation. Catgut ligatures were used; a drainage tube was inserted; and the wound closed by interrupted sutures and dressed antiseptically. In this case we must rely chiefly on the hospital record of the case, which is quite incomplete, except as to temperatures taken. It is known, however, that the wound healed very kindly throughout, and mostly by first intention. Some pus was noticed at several dressings; but no surgical fever of any moment occurred. The temperature rose twice to 38 3-5° C., but otherwise ranged between 37° C. and 37 4-5° C.

Case 7.—Mrs. S. F., æt 56. Epithelioma of forearm 4½ centimeters in diameter. Removed by oval incision, and the margins of the wound approximated with interrupted sutures. The peculiar dark serous discharge was abundant in this case. Consequently the wound was redressed after 24 hours for the first time, and afterwards three times more at intervals of two and three days. The wound healed by first intention except where

the discharge from the interior made its exit. No pus was formed and no fever experienced, but the patient had some pain.

Case 8.—S. T., æt 45. A lacerated wound of the scalp semicircular in outline, and fully 8 centimeters in extent. Also a lacerated wound of hand, with fracture of first phalanx of second finger. Four sutures were put into the former and one into the latter wound, and both dressed antiseptically. They were redressed once i. e. on the second day; and on the third the wounds were closed so that the patient went out at his own request. The temperature was about normal in the morning, but it rose to 39° C. and 39 1-5° C. on the evening of the first and second days respectively.

Case 9.—J. C.. æt 55. Encephaloid tumor of the thyroid body. The irregularly globular tumor was about 8 centimeters in diameter, and compressed the trachea considerably, so that the patient experienced marked difficulty in breathing when lying on his back. Dr. Powell made a straight incision 8 centimeters long, parallel to the inner border of the sterno-cleido-mastoid, passed his finger around the tumor, tore loose many of its attachments and removed it. Much hæmorrhage attended the operation, and several ligatures were required. The margins of the wound were stitched together and the regular antiseptic dressing applied. In this case there was a large discharge of sero-sanguinolent fluid which made it necessary to renew the dressing daily and sometimes oftener. But no pus was formed nor any bad odor observed. The temperature was 38 4-5° C. on the morning after operation; but after that it did not exceed 38 2-5° C. The patient was always comfortable and slept well, but did not eat much. In a week after the operation the wound was nearly healed, and the patient went home of his own accord.

Case 10.—Lacerated wound on the dorsum of a hand, caused by a saw, cutting off the head of the metacarpal bone of the index finger, injuring the base of the first phalanx of the middle finger, and laying open the joint between the first and second phalanges of the little finger. The index finger remained attached by a palmar flap, through which some flexion was retained when the joint was fixed. The injured ends of bone and numerous strands of soft tissues were removed. The wound was carefully

cleansed with 20 per cent. solution of carbolic acid under the spray, its surfaces approximated and its edges held in opposition by plastic pins. The Lister protection and gauze were applied and the hand then adjusted on a palmar splint. Was redressed on the 4th day. Union by first intention of nearly the entire surface was evident. No pus nor foul odor. Everything was in the same excellent condition on the 7th day. Healing was complete except two small granulating orifices at angles of the wound. Removed the suture pins. A simple dressing would now have been sufficient; but the gauze was put on four days more. Then the healing was perfect.

Case 11.—J. H., æt 29. Amputation of index finger at carpo-metacarpal joint after a suppurative lymphangitis of the hand, following a bite of the finger implicated. Was redressed after the 3d day. In the meantime the temperature was high. But it lowered after the first dressing and remained nearly normal. The amount of pus, considerable at first, became less and less with each of the following dressings which were applied on on the 6th, 7th and 10th days. The patient's general condition became very much better. (Suppuration was to be expected in this case from the previously infected tissues).

Case 12.—R. M., æt 13. Amputation of 3d, 4th and 5th toes with the greater portion of their metacarpal bones. A scant plantar flap was all that could be constructed; yet the wound was closed with sutures re-enforced by adhesive straps, which relieved the tension. The dressing was renewed on the 3d and 5th days, when union by first intention in about three-fourths of the wound was assured. No sloughing occurred, but a few small gaping orifices remained at angles of the wound, from which a little purulent fluid issued. While these were granulating, the regular dressing was applied five times more at intervals of three and four days. The temperature, after the first day, was 39° C., after the second day 38 2-5° C.; but afterwards never rose above 37 4-5° C.

Case 13.—T. K., æt 65. Necrosis of toe, amputation through the metacarpal bone. Was done à la Lister. Patient continued comfortable. The dressing was renewed on the third day, when the wound appeared quite favorable; again on the fifth and sixth

days, when a little pus was found and an offensive odor. On the fifth day the nurse reported the patient to have had a chill, though he had not felt cold. Following this, the temperature rose to over 40 3-5° C. This continued without much reduction, together with a very obtuse mental condition until death on the morning of the seventh day. Post mortem showed septicæmia.

Case 14.—C. G., æt 53. Amputation of irritable stump of leg. The patient continued to be very comfortable, and not the slightest odor could be detected as days passed by. The leg was redressed for the first time at the end of 94 hours, when union by first intention throughout was assured. The discharge was very small in amount and all smell was "sweet." The dressing was now left on for seven days and then discontinued, the wound being healed with the exception of two very small and superficial granulating surfaces, to which carbolized cosmoline was applied. The temperature in this case was 38½° C. a few hours after the operation, but subsequently it never exceeded 37 4-5° C.

Case 15.—S. M., æt 7. Railroad injury, crushing of both ankles. Three hours later Dr. Gunn amputated each leg through its middle third. Hæmorrhage had been considerable before the operation; and after it the little boy was ghastly pale with scarcely any radial pulse. Reaction came slowly; and later a period of traumatic delirium was encountered. The stumps were redressed on alternate days. The proper sero-sanguineous discharge continued with a good odor of the parts until the points of the antero-posterior flaps began to slough, as they did seemingly from too great tension. Union by first intention had taken place very satisfactorily on the interior of the wounds between the bodies of the flaps; and the granulating surfaces which remained when their dead extremities had dropped off, assumed almost perfectly the condition of a typically healthy ulcer under this dressing. Before the sloughing no pus occurred, but during its continuance pus was always found on the dressings which were then changed daily. The temperature was high in this case, especially during the first week. Then it lowered and afterwards rose once more for a very short time.

REMARKS.—In order to succeed with with the Lister régime the following points should be observed:

(1.) All hæmorrhage should have ceased before closing the wound.

(2.) Animal ligatures only should be used and they should be cut short.

(3.) When a wound is large or when from its vascularity much discharge may be expected, one or more drainage tubes should be inserted, whose orifices must not be occluded by the oiled silk protective.

(4.) The entire dressing should be soaked in carbolized water, when ready cut, in order to make it more pliable. This feature is desirable not merely for the greater comfort it affords the patient, but especially because the individual pieces can be more exactly molded to the surfaces adjacent to the wound.

The conditions from which we recognize the efficiency of a dressing or the necessity for its renewal are (1), The odor of the part (2), The amount and character of the discharge, and (3), Pain and temperature. If the odor becomes putrid; if the discharge becomes purulent or so great in amount as to moisten the outermost layers of the dressing: if pain be unduly great; if the temperature be very high or take a sudden rise; if any one or more of these features exist, a renewal is called for; but in their absence the same dressing may be left on indefinitely.

DR. JAMES E. MORGAN, the last surviving officer of the Pharmacopœia Convention of 1870, has issued a call for a Sixth Decennial General Convention to be held in the city of Washington in May, 1880, for the purpose of revising the Pharmacopœia of the United States.

The rules adopted by the last convention are to be found on page 11 of the present edition of the Pharmacopœia.

The call is addressed to State Medical Societies, and to incorporated Medical Colleges, Colleges of Physicians and Surgeons, and Colleges of Pharmacy throughout the United States.

Society Reports.

ARTICLE VII.

CHICAGO MEDICAL SOCIETY, Regular Meeting, being the Twenty-seventh Annual Meeting, April 7th, 1879. Dr. Ingals, president, in the chair.

The Secretary, Dr. Graham, read his report, which while it showed one hundred and eighty-five members at present on the society's roll, did not, he said, represent more than one-half the profession of the city eligible for membership.

The result of the election for new officers was as follows:

President, Dr. E. Andrews; Vice-President, Dr. R. G. Bogue; Secretary, Dr. D. W. Graham; Treasurer, Dr. F. H. Davis.

An honorarium was tendered to the secretary for his efficient services during the past year, and one to the proprietor of the Grand Pacific Hotel, Mr. Drake, for courtesies extended to the society in providing commodious quarters for their meetings.

A committee was appointed to see the new Mayor-elect, and desire him to separate the duties of the sanitary officials from the domination of politics, and to retain in office the present Health Commissioner, Dr. De Wolf.

After the customary brief addresses from the retiring and the newly elected officers, the society adjourned.

ARTICLE VIII.

CHICAGO MEDICAL SOCIETY, Regular Meeting April 21st, Dr. Andrews, president, in the chair.

The president read a paper on "The Treatment of Hæmorrhoids by Injection," which was substantially the same as his

article on the same subject in the present number of the JOURNAL. The paper being before the society for discussion, DR. BYFORD, after commending it highly, inquired concerning the use of other strong acids beside the carbolic applied locally, and as formerly employed. He had often found them effectual, nitric acid particularly, and usually comparatively painless.

DR. ENGERT observed that she had used the ungentum hydrargyri ammoniati, U. S. P., in several cases with excellent effect.

DR. INGALS had enjoyed listening to the paper, and was especially glad to see that Dr. Andrews had not hesitated to go outside of the regular professional ranks, and gather information from every available source. Many of the charlatans were reckless or ignorant enough to resort to practices which we would not dare to employ; and yet we ought, in justice, to profit by their experience. He also inquired concerning the local use of iodine for piles; he had had no experience with it, but thought that, on theoretical grounds, it might be used with advantage.

DR. FENN said that he had been in the habit of treating many of these cases more as medical cases than as surgical; that is treating the digestive organs which were often at fault, and endeavoring to perfect the processes of digestion and elimination—which was often of prime importance. But he should be more ready now than ever to resort to radical means of relief by the method of injection.

DR. STEELE asked if the writer of the paper had had any experience in rupturing the sphincter ani.

DR. PAOLI thought that by many of the means of treatment strictures of the rectum had been produced from the cicatrization following removal of tissue. He insisted that in persons of intemperate habits or "high-livers" there was a necessity that they should adopt a temperate life and follow simple hygienic rules. He also said that he had given relief by using suppositories containing iodoform.

DR. HAYES said he understood that certain of the quacks used a little clamp about the base of the pile to obstruct the circulation before injecting it. Knowing the effect of ergot he had more than once used a simple gelatine coated 3-grain pill of ergotine as a suppository, and this with excellent result.

DR. BOGUE had used injections of 95 per cent. carbolic acid, pure, in six cases, injecting from .03 to 0.40. In five cases the results were certainly beneficial; in the other case uncertain. The pain was inconsiderable in all but one case.

DR. TILLEY stated that Richardson, of London, had been using the sodium ethylate for destruction of vascular tumors of various kinds, and he inquired whether Dr. Andrews had used it for destruction of piles.

In reply to the various queries, DR. ANDREWS stated with regard to the use of strong acids, that there was much contradiction among authors concerning their effectiveness and painlessness. In his opinion, when a pile was uninflamed, nitric acid was effectual and simple; but in proportion as the pile became thickened and developed sensory nerves the acid caused more distress. He had heard of the use of iodine, but was unable to give any definite information concerning it, though he had little doubt that it might be of service. He had never tried to rupture the sphincter in these cases. In one of his early cases he had removed too much tissue and had seen a stricture of the rectum as the result; and he would give a general caution against the removal of too much of the base of the pile, whether it were crushed, snipped off or cauterized. He had not used the sodium ethylate because he had not thought it any better than to use the caustic alkali itself.

Lastly, when promptness of result was desirable on account of sympathetic bladder or uterine inflammation, he thought the method by injections would be too slow, and some more rapid one must be adopted; but when the piles were above the anus, he thought the method of repeated, small, diluted injections the most preferable of any.

ARTICLE IX.

THE WEST CHICAGO MEDICAL SOCIETY met at the Washingtonian Home, Monday evening, March 24th.

Dr. D. R. Brower reported three cases of Traumatic insanity, exemplifying, as the doctor thought, three points: First, that the insanity may appear at a long interval after the cranial injury.

Second, that in the first manifestations the emotional aberrations predominate, later the intellectual. Third, that acute meningitis is not an essential feature of the disease. The doctor discussed at some length, the medico-legal phases of this condition.

Dr. Holmes, the subject being thrown open to the society, narrated a case similar in its history and bearings, to those of Dr. Brower. Dr. Lyman mentioned another; and a second one in which insanity occurred in an individual who had suffered an injury to the spinal column, the cord having apparently escaped injury. Dr. Brower mentioned incidentally a case of insanity following hernia—the insanity as well as the hernia being relieved by a truss.

Dr. Salisbury narrated a case of periodical mania, following at a considerable interval a cranial injury. The mania ceased after the free exhibition of quinine.

Dr. Bridge mentioned the case of a patient who received an injury on the head. Some time subsequently he became suddenly and violantly insane. In a short time he recovered, complaining only of pain in the head. His intellect is now somewhat impaired.

Dr. Strong presented a specimen showing anchylosis of the spine—a case of recovery from Potts' disease. The doctor referred to another specimen in his possession, which was still more remarkable.

Dr. Earle presented a specimen of intus-susception, in which there had been none of the ordinary symptoms, except vomiting. The autopsy showed no evidence of inflammatory action—not even an effusion.

OBJECTIVE SOUNDS FROM THE EARS.

Dr. Holmes presented the abstract of a case, in which a young lady 17 years of age, pale, weak, often troubled with a cough, had suffered since early childhood from a peculiar, involuntary spasmodic contraction of the pharyngeal muscles. These spasms, occurring about forty times a minute, resembled the act of swallowing. Synchronous with each spasm was heard very distinctly, eighteen inches from the patient's left ear, a peculiar clicking sound—much less distinctly from the right ear. Listening to

the patient's mouth, wide open, revealed the same sound, but faint and as if coming from a distance.

Dr. E. F. Ingals made repeated and careful laryngoscopic examinations of the fauces, and observed a separation of the lips of the Eustachian tubes with each muscular spasm, and with each sound.

The throat presented a normal appearance, the region of the mouths of the Eustachian tubes, however, being bathed with a slight muco-purulent secretion.

The external meatus was normal. The membranæ tympani were each thick and opaque at their upper portions, and thin and translucent at their middle and lower segments. With each spasm was a slight motion of the left membrane. The use of quinine and iron, cod liver oil and Fowler's solution internally, exercise and freedom from her previous close confinement, with saline solutions for the nostrils, after some months, improved the general health, but effected no change in the local symptoms.

The reporter was inclined to believe the sounds were chiefly caused by spasms of the tensor tympani muscle. The separation of the moist lips of the Eustachian tubes might increase the intensity. Such cases are very rare; a few are mentioned in special journals of otology. In the *Boston Medical and Surgical Journal*, November 3, 1877, is reported by Prof. Henry J. Bigelow, a case in some respects analogous. The sounds seemed, however, to proceed from the throat. Dr. Holmes stated that he once had the opportunity of examining this case. He had been informed by Prof. Bigelow, that this patient, as also another similarly affected, finally recovered.

Dr. Chris. Fenger, pathologist to the county hospital, exhibited some morbid specimens obtained from a recent patient. When he opened the body, the doctor had no history of the case, except that the patient had presented typhoid symptoms. Opening the abdomen, he found infarctions in the subserous tissue of the intestines, in the spleen and kidneys. The source of these emboli was found in an ulcerous endocarditis, both sets of semilunar valves presenting an abundant deposit. Upon examining further, an embolus was found in the left middle meningeal artery, which had caused an extensive infarct; and several small

infarcts were found in each retina (illustrating the importance of the ophthalmoscope in the diagnosis of heart disease). The doctor thought, from the fact that some of the infarcts were breaking down into abcesses, that the cause of the endocarditis was septicæmia. There was no evidence of acute rheumatism, nor of any surgical operation. Careful search, however, revealed a suppurating synovitis at the bottom of a large bunion. Dr. Fenger said that this might have been the starting point of the whole disease. As proof that this was a blood disease, the doctor exhibited under the microscope some of the exudate from the heart valves, in which were myriads of micro-cocci.

W. T. BELFIELD, *Secretary.*

A STIMULANT AND CORRECTIVE FOR THE *Index Medicus.*— We are very proud of this new journal. But here comes L. H. Petit, one of the librarians of the Faculty of Medicine in Paris, and gives the following list of medical and scientific publications not catalogued in the *Index*: *Revue d'hygiène*, Paris, 8°; *L'art dentaire*, Paris, 8°; *La Gazette odontologique*, Paris, 8°; *Annuaire de thérapeutique*, Paris, 12°; *Annales scient. de l'Ecole normal supérieure*, Paris, 8°; *Bulletin de la Soc. de méd. légale*, Paris, 8°; *Journal des sciences méd.*, Lille, 8°; *Gazette d'ophthalmologie*, Paris, 8°; *Le Praticien*, Paris, 8°; *La moderna med.*, Torino, 8°; *La Sardegna med.*; *Atti della Reale Academia delle scienzedi Bologna*; *La Scuola med. Napolitana*, Napoli, 4°; *Giornale internazionale delle scienze med.*, Napoli, 4°; *Cronica cientifica*, Barcelone, 4°; *La Gaceta méd.*, Lima, 4°; *Liverpool and Manchester Medical and Surgical Reports*, 8°; *Clinical Lectures and Reports*, London, 8°; *Reports of Dublin Pathological Society*, 8°; *Public-Health Reports of the Medical Office of the Privy Council*, London, 4°; *Deutsches Archiv für Geschichte der Medicin*; *Centralblat für Nervenheilkunde*, Leipzig, 8°; *Galenos* (Greek), Athens, 8°.

Foreign Correspondence.

ARTICLE X.

SURGERY IN LONDON. — OSTEOTOMY. — CALLENDAR'S AND LISTER'S METHODS OF TREATING WOUNDS.

Messrs. Editors:—With only the scanty time afforded by a two weeks' opportunity to judge of matters and things, I am justified in making one rather positive assertion, and that is, that no country's schools have better, if as good, clinical advantages as do these in London. Better results could not be effected with the material at the clinics than are there obtained by the renowned gentlemen conducting them. Assuredly surgery is here on the topmost wave of success and advancement. He who passes by London in the fond delusion of meeting with something better beyond, has failed to entertain, or be entertained by, the angel in disguise. Earnest men are here — learned, skillful men — men of genius and worth; and their works are full of the richness of ripe experience and and thoughtful maturity. Always at work, never idle, ever alive, grand results must be the fruit of their incessant activity. The cordial good feeling and courteous treatment shown to a stranger by all these busy, and I may say overworked men, is beyond expression pleasant and cheering.

So far, I have visited only three or four hospitals, among them, of course, the oldest of all, St. Bartholomew's, always noted as the school of sound surgical teaching and successful surgical practice. I don't know why I came here first; perhaps it was because I had a personal fondness for it, owing to the fact that Thomas Vicary, one of the earliest and most renowned teachers in this school and hospital, published the first work on anatomy written in the English language. As one treads the

stones of the court of this hoary old structure, wanders through its halls or wards, or sits in its amphitheater, the very air seems heavy with truths evolved by its men of genius, and the walls echo the words of wisdom and honest instruction which issued from the lips of some of the greatest men whose triumphs have adorned the temples of our profession. It must be that the men who, in succession, follow in the footsteps of these great teachers, are aided and encouraged by the memories of the departed, to renewed determination of maintaining the glorious inheritance left them.

The happiest good feeling is shown to exist among the gentlemen associated together here. This fact will impress the visitor immediately. No self assertion, no spirit of criticism, each seems to vie with the other in offering assistance and sympathy. There is no solemn funereal silence maintained through an operation, but opinions are freely given and asked for by all present. It seems certain that good only, results from this freedom of consultation and mutual support. I have seen it nowhere else in any such degree as here, and its introduction as a customary method of action in other places, would eradicate stiffness, adverse criticism and many other of the unpleasant surroundings during public operations, to say nothing of the benefits which would assuredly follow its adoption.

Another good thing here. On every Thursday afternoon all the surgeons connected with the hospital appear, and all cases requiring operation are brought publicly into the theater, and an open consultation held upon them, every surgeon expressing his opinion on each case, the majority deciding what shall be done. The students being present reap the advantage of seeing the manner each one has of studying his cases, and the course of reasoning which leads up to the final conclusion.

The newest study presented to me so far has been that accompanying the comparatively new operation called osteotomy, done for the relief of deformity, either congenital, or acquired as the result of injury or disease. I call it comparatively new, because I believe that the last claimant for the honor of having originated, put into practice, and established the perfect feasibility of the operation, dates his first case sometime in 1876. It is certainly

a very young operation to have come so early into almost universal adoption. Everybody here divides and cuts off bone in every possible direction, and for every possible trouble, with little more fear, apparently, of resulting harm than would probably follow paring a man's nails.

Mr. Callender, of St. Bartholomew's, did the operation on a boy about 12 years old, over a week ago. The little fellow was badly knock-kneed. The operator made an oblique incision from within downwards and outwards, over the tibia about one and one-half inches below the joint, freely exposing the bone. He partially divided the bone with a narrow chisel and then forcibly fractured it. The fibula did not give way at once, as frequently occurs, so Mr. C. cut down upon the fibula and divided it with the chisel. Then as the leg was prevented from coming to the same line as the femur by the external lateral ligament of the knee-joint, that ligament was divided subcutaneously, and the members of the entire extremity, placed in the same line. A long external splint extending from below the foot well up upon the body, was then applied, and the padding and rollers so arranged as to allow of easy dressing without disturbing the limb. The wounds were closed with sutures and covered with lint soaked in carbolized oil, 1 part to 10 or 12. The oil to be constantly renewed so as to keep the wound fresh and soft, but the other dressing on no account to be disturbed. I saw the boy again a week after the operation, the same blood-stained dressings were on the knee as when I saw him put to bed, only the most external had been taken away. The carbolized oil had been repeatedly applied. Everything was sweet about the wound, there was no evidence of inflammation; the patient was comfortable and free from any pain. No attempt whatever was made to do an antiseptic operation. Mr. Callender insists on, provides for, and secures absolute rest for his patients, after and during the treatment of any injury. His success is as good as any other surgeon's with similar cases and like surroundings, and he certainly attributes very much indeed of this good result to the imposition and maintenance of perfect *rest* of the injured part, and of the entire body. It is the surgeon's duty to look to its requirement, to provide the means of securing it, and to be resolutely deter-

mined, that it shall be maintained. One who follows his cases and sees his results, cannot fail to be impressed with the truth of these principles which he so ably and incessantly inculcates.

I saw a case done by Mr. Lister at King's College Hospital on a man 30 or 40 years of age; both limbs were operated upon by Mr. Lister with all the antiseptic precautions and treatment so earnestly advocated by that gentleman. In this case, only a separation of the internal condyle of both femora was effected. The incision through the soft parts called subcutaneous, was made just opposite to the point where the condyloid surface becomes continuous with the surface of the shaft of the bone. A narrow, slender chisel was introduced into this opening, and the condyle separated from its attachment by driving the chisel into the bone at different points, until the condyle was all but free; then it was forcibly broken loose by drawing the leg strongly inwards. The leg was then easily placed in line with the femur. The chisel was not allowed to enter the joint or even to touch the catilaginous coverings of the end of the bone. Both limbs were then fixed in plaster of Paris casings from hip to ankle, a fenestra being cut out opposite to the seat of the wound. The wound was dressed antiseptically every day for a day or two, and then once a week or as often as occasion required. Mr. Lister showed in this case, that underneath the blood clot which filled up and to a degree overlapped the wound in the soft parts, the process of cicatrization was progressing rapidly without any evidence whatever of inflammation or suppuration. He said this often occurred in wounds dressed according to his method. He remarked also, that blood-clots in wounds were organized, in so far that their constituents were replaced by connective tissue cells, and the débris absorbed. No one can more carefully and certainly provide for free drainage, than does Mr. Lister, in every wound that he makes. If there is any one detail of operative procedure to which he devotes more attention than drainage, it is close and accurate adjustment of the edges of wounds. Relief of tension is always provided for, by sutures introduced far away from the edges; they are always of wire, and held in place by oval shaped leaden plates, 2 Cm. wide and 4 Cm. long. The interrupted sutures are placed near to each other between these long and deep

ones, for preventing tension. Catgut ligatures are used to control hæmorrhage. He showed several other cases of osteotomy, all doing well. From what has been seen thus far, the conviction is that anything like an ill result is the grand exception, after these operations on bone. Last Thursday, at the consultation at St. Bartholomew's, Mr. Callender presented a boy aged 6 or 7 years, who had met with a fracture of both bones of the forearm sometime previously. He had received no treatment from a surgeon, and union had taken place with great deformity, sufficient to interfere with and prevent rotation of the forearm. He proposed to cut down upon the bones, divide them with the chisel, place them in proper position, and treat as in an ordinary fracture. He preferred this to the old method of forcible fracture, because he in this way would know just what injury he was inflicting, and felt no concern but that surely a good result would follow the operation. All these cases are practically compound fractures of bone, and to hear these men talk so unreservedly, and with so much evident satisfaction and confidence, about the result, after surgically producing the injury, is one of the many revelations which have been presented to my vision; and seemingly the bolder the surgical proceeding, the better and more satisfactory the result.

Last Wednesday I saw Mr. Lister make an amputation at the hip-joint for osteo-sarcoma of the lower end of the femur. It was of immense size, and of very rapid development; the history included only a period of seven months. The patient was a woman of about 40 years of age. Mr. L. made an ordinary amputation of the thigh inside of the upper third, as the first step of the operation. After carefully controlling all bleeding vessels in this section, he removed the remainder of the femur by means of á long incision down the outer aspect of the stump, which enabled him to dissect out and disarticulate the remnant of the bone. He remarked that he thought this the best method to avoid excessive loss of blood and shock. The parts being extremely vascular, over forty ligatures were required to stop bleeding. The wound looked almost as "wide as a church door, and as deep as a well," as it lay gaping on the table; a fearful cut indeed. All the details of antiseptic dressing were carried out as they can

only be by the originator of the system. If you were to ask me what I think of antiseptic dressings so far, I should answer that I am still hesitating between opinions. I will tell you why, by giving you an account of the result of two quite similar operations, done, one by a non-believer, and the other by Mr. Lister. The operation in both cases was for very extensive infiltrating carcinoma of the female breast, complicated with enlarged glands in the axilla, the removal of which required very extensive incisions and dissections. Mr. Callender did his operation without any reference whatever to antiseptic dressing, provided carefully for drainage by means of tubing, and brought the edges of the wound into close approximation. The dressing consisted of several double folds of lint soaked in carbolized oil, and covered with oil silk all held in position by adhesion strapping, and the arm carefully fixed to the patient's side—everything done to provide for perfect rest. I saw the patient the next day, and was present when the wound was dressed. The patient was absolutely free from all pain during the whole proceedure, in fact the only thing required, was to cut the plaster strips as they passed beyond the lint folds, and the dressing was lifted off without any trouble whatever. The oil of course had prevented drying, and been a soothing application. This oil is applied by means of long brushes, and nothing harsh of any kind is allowed to touch the wound or patient. By this means the patient's confidence is positively secured, and any fear of pain on his part done away with. No one can deny that such a result is of incalculable advantage to the patient after any operation, and certainly aids the recovery. The dressings are easily secured again by short strips of plaster carried over the old plaster left in position. These first plaster strips are left on until the cure is complete, never torn away while the wound is fresh and tender, a process which always brings agony to the patient. After 24 hours this case was in every way entirely comfortable. Very slight elevation of temperature, less than 38°; during the entire next week this gradually and steadily sank to normal. I saw the patient at the end of the week, the wound all healed, sutures all removed—no pus—not anything but comfort and cheerfulness on the part of the patient. No result could be better than this, and yet how

simple the treatment, how plain and easily fulfilled the requirements! Mr. Callender says these results are common with him, and with his statement to support me, I assert freely, that this is the best and only method of treating wounds.

Mr. Lister did his operation of exactly the same kind and nature, with all his great skill and care. Everything worked to a charm, there was no abscence of spray, everything used was rendered thoroughly aseptic. Mr. L. used similar, if not greater care, than we have noticed in the other case, in providing for drainage, and in the approximation of the wound. The patient's chest and corresponding arm were swathed in the gauze dressing, which was secured in position first by gauze bandage, and then finally by a few turns of the elastic roller, which prevents it from becoming displaced by any movements of the patient. I saw the dressing re-applied a few days after. There was no putrefaction. The wound looked perfectly healthy, but the patient was not as comfortable as in the other case. The change of the dressing was immensely more difficult for the surgeon, and as certainly more painful for the patient, because far more movement on her part was necessitated in the removal and re-application of the gauze, even with so skilled a director as Mr. Lister to superintend. Mr. Lister says pyæmia has passed away, erysipelas is a thing of olden times; ary cavity of the body, joint or otherwise, can be freely opened and examined with impunity and perfect confidence, under the protecting wing of antiseptic dressing. With this statement to support, comes the second assertion — every surgeon ought to master the principles of this most masterly system of safety in operation, and after injuries.

Many surgeons here do not use the antiseptic method of Mr. Lister at all; many in a slipshod manner; none like Mr. L. himself.

C. T. PARKES.

ARTICLE XI.

SOCIETY OF BIOLOGY. February 2, 1879. President, M. Paul Bert.

Contractions due to Intra-ventricular Hæmorrhages.—M. Duret, à propos of a communication made by M. Cassey at a previous meeting, said he had made experiments upon animals which seemed to him to disprove the theory of contraction advocated by M. Cassey. The speaker had found an injection of either water, wax or oil, provided it was made rapidly, produce an immediate and intense tetanism, with considerable elevation of the arterial tension. He attributed this contraction to reflex irritation of the corpora restiformia, or the sensitive portions of the meso-cephalon. Mechanical excitation, executed experimentally, of the corpora restiformia, sufficed to produce a pronounced episthotonos. Hence the speaker concluded that in intra-ventricular hæmorrhage, the contraction is the result of the reflux of the sub-arachnoid fluid and shock of the corpora restiformia, or to the direct excitation of the blood which, by the aqueduct of Sylvius, flows into the fourth ventricle. M. Duret had undertaken these experiments to verify his theory of cephalo-rachidian shock. He has by intra-ventricular injections, simulated the displacement of the sub-arachnoidean fluid, and in the two cases the phenomena were the same, to wit, violent tetanism.

M. Rochefontaine could not admit the theory of M. Duret, as, according to the speaker's observation, there was very often no fluid in the cerebral ventricles of the dog; any one could convince himself of this by observation. M. Duret replied that in the ventricular cavities and around the medulla oblongata, there existed in the cadaver, empty spaces, yet it should not be inferred from this that they existed in the living animal. The elementary laws of physics and physiology required that these cavities should be filled by a liquid. To establish the presence of a sub-arachnoidean fluid, M. Rochefontaine had placed the subject under very unfavorable experimental conditions; in thus opening freely

the cranium, and anæsthetizing the animal, he changed the intracranial arterial tension, consequently modifying the quantity, normally existing, of the sub-arachnoidean fluid. By reason of the opening into the cranium, an enormous turgescence of the brain was induced, displacing the fluid normally existing in the ventricles, and driving it into the sub-arachnoidean space. M. Duret proposed to further investigate this interesting and difficult question, and present his results at a subsequent meeting of the society.

Hygiene of Sight.—M. Javal made a statistical report upon certain alterations of vision in children, embracing a very large number of cases. In every case in which the vision is not absolutely good, an examination revealed astigmatism in the children, by correcting which, normal vision was established. At the school Mouge, where the lighting is excellent, M. Javal has found ten per cent. of the children astigmatic, but thinks it probable that they had become so previous to entering the school. The speaker then gave the reason why books printed on yellowish paper were less fatiguing to the eyes. Though the astigmatism was corrected, there was the error of chromatism which they had scarcely dreamed of combating. Yet a little reflection showed that this might be corrected or reduced to a minimum by the employment of mono-chromatic light, but as it was desirable to suppress the least possible amount of light consistent with the correction, it was advisable to suppress one or the other extremity of the spectrum. If the red end be eliminated, too much light is lost. The desired object is much more satisfactorily attained by absorption of the blue and violet rays, the resulting tint being a yellowish grey. Such is the true reason of the superiority of paper tinted as above for readers' and students' use.

Fatty Emboli in Fractures and Osseous Degenerations.—M. Déjerine said he had published the notes of two cases in November last, in which he had observed fatty emboli following osseous degenerations. Since that time he has had occasion to observe six others. In examining the lungs, he has each time very clearly established the existence of fatty emboli, proportioned in quantity to the extent and intensity of the osseous degeneration. He has also found, as stated by the authors, that the emboli were

less marked the longer the time which had elapsed between the traumatism and death. In two cases only, has he found fatty emboli in the liver and kidneys. He has not had occasion to observe a case in which it was general, as has been many times seen in Germany. M. Déjerine, moreover has made experiments upon fatty embolism in the laboratory of M. Vulpian, using dogs as subjects of his experiments. In varying the operative procedure, he has been able to produce fatty embolism in varying degrees in these animals, from the slightest to the most severe forms, such as observed in man after large wounds of the bones. The mode of procedure followed by the observer, consisted in production of simple fractures, without communication with the exterior, in which cases the fatty emboli of the lungs were very slight, and in some cases hardly perceptible. When, on the contrary, the marrow was implicated, in whole or in part, by the introduction of a foreign body into the medullary canal, the fatty embolism was very marked, and the fatty particles could be traced in the blood from the veins of the wounded member to the vessels of the lungs. If, instead of introducing an inert body such as a piece of iron, a substance such as a piece of laminaria digitalis be inserted, the embolism was exceedingly violent, the lungs being literally injected with fat. These observations confirm those of Bergmann and Halm. M. Déjerine remarked that the embolism produced by the introduction of pieces of laminaria into the medullary canal of the bone, was much more pronounced than that produced by other experimental procedures. It appeared to the speaker that the fatty embolism in man was probably successive to a rapidly developed osteo-myelitis, which by pressure from within and without, forced the fat into the osseous capillaries, and from there into the venous circulation. In the animals experimented upon, it is difficult to produce a veritable osteo-myelitis and we should not demand more from experimental pathology than it is able to give; but by introducing in the entire length of the medullary canal a piece of laminaria we produce a persistent irritation of the medulla, as well as an eccentric compression of the medullary canal. These experiments seemed to the speaker to confirm the theory already enunciated, of the pathology of fatty embolism, as in the experiments with the laminaria one

of the conditions, at least, was paramount, namely, that of tension, and as fatty embolism succeeded this tension, it was fair to infer that this was one of the essential elements in its production.

O. C. OLIVER.

HOTEL D'ORIENT PARIS, March 5, 1879.

ARTICLE XII.

SOCIETY OF BIOLOGY. March 1, 1879. President, M. Paul Bert.

The president communicated to the society the results of some of his experiments on the removal of one of the cerebral hemispheres. Four axolotls were shown, two white and two black, in each of which a cerebral hemisphere had been removed six months previously. These batrachians, living in the water, had not presented any circulatory trouble. The speaker had operated upon bats in a like manner, and with negative results. There were some curious points noticed on the axolotls, however. Immediately after the operation, the white axolotl became covered with black spots, the black axolotl also became very curiously mottled, and at the present time the pigment showed a strong tendency to disappear.

Contraction in Intra-ventricular Hæmorrhages and Injections of Liquids — M. Cassey showed that his experiments differed from those of M. Duret, communicated at a previous meeting, in many essential particulars. First, M. Duret wished to make the injection not in the ventricles, but in the sub-arachnoidean space, but in two instances the canula, introduced too deeply, penetrated the cerebral substance to the depth of several millimeters, and the liquid injected violently in the interior of the cerebral substance, forced its way through the hemisphere to the ventricles. M. Cassey, on the contrary, has injected coagulable liquids directly into the ventricles, by the aid of a canula introduced through the corpus callosum, at its uncovered portion, i.e., corresponding to the median fissure of the brain. Secondly, M. Duret has injected a considerable quantity of liquid, thus determining ecchymoses of

the ventricular surfaces. M. Cassey has never injected a quantity of liquid exceeding 10 to 20 grams, and has produced no lesion of the ventricular surfaces. Yet the animal has presented an intense and generalized contraction. Thirdly, M. Duret admits that the contraction is due to the excitation, by the injected liquid, of the flow of the fourth ventricle, and especially the corpora restiformia. M. Cassey rejects this theory, in explaining the contraction produced in his experiments, for in one very clearly marked case, the injected liquid coagulated in the middle and lateral ventricles, without having penetrated the fourth ventricle at all. M. Cassey thinks the contraction due to excitation of the subjacent excito-motor portions of the encephalon (internal capsule and cerebral peduncles) due to rapid compression by the walls of the middle and lateral ventricles. In like manner M. Cassey would explain the contraction in hæmorrhages limited to the lateral ventricles, not admitting the theory of M. Duret, which attributes the contraction in these cases to shock of the sub-arachnoid fluid, upon the floor of the fourth ventricle. In cases where the effused blood flowed into the fourth ventricle, the convulsions were no more frequent than in cases where the effusion was limited to the lateral ventricles.

In 20 cases of hæmorrhages into the lateral ventricles, in which the blood had flowed into the fourth ventricle, convulsive phenomena were observed in 8, while the 12 remaining cases showed none. O. C. OLIVER.

HOTEL D'ORIENT, PARIS, March 10, 1879.

THE annual meeting of the Association of American Medical Editors will be held at Atlanta, Ga., on Monday evening, May 5th, 1879. The annual address will be delivered by the President, Wm. Brodie, M.D., of Detroit. All editors of medical journals and publications are entitled to membership in the Association, and are cordially invited to be present and participate in the meeting. — F. H. DAVIS, M.D., *Secretary*, 65 East Randolph street, Chicago, Ill.

Domestic Correspondence.

ARTICLE XIII.

BOSTON LETTER.

Messrs. Editors :—Probably there is no city in the country in which surgeons and physicians are so unanimous in the use of ether as an anæsthetic, and so determined to have nothing to do with chloroform, as in Boston. It may be said that this condition of things is perfectly natural, Boston being the city which introduced ether to the profession. But I think this enmity to chloroform springs rather from the habitual conservatism of our physicians. They see that ether is a safe anæsthetic; they see that the administration of chloroform is attended with danger and therefore let it alone.

There are a very few exceptions in which our physicians give chloroform in confinement cases, but I cannot remember that I ever saw it used in the hospitals of this city. Boston surgeons do not relish waiting for the insensibility of an etherized patient any more than do the surgeons of other cities, but they prefer to wait rather than run risks. There are surgeons who do not seem to consider that life is of more value than time. Since the day when Dr. John Collins Warren performed the first operation upon an etherized patient—now thirty-three years ago—Boston surgeons have found ether good enough for their purposes. At the Massachusetts General Hospital the administration of ether has been reduced to a perfect system. The patients are etherized long enough in advance of the operation to preclude all waiting on the part of the surgeons. After the operation, unless their recovery from the ether intoxication be complete, they are not taken back into the wards, but are conveyed to the "recover-

ing rooms," which adjoin the amphitheater, and there remain until the fight and delirium have disappeared. This is an exceedingly wise arrangement, for the patients in the wards are thereby protected from the effects of fear or nervousness invariably caused by men who are half wild from the fumes of ether. Moreover, there is in this amphitheater an operating chair, a most ingenious affair, devised by Dr. H. J. Bigelow in 1854, by means of which an etherized patient is not only perfectly secured and incapable of movement during an operation, but if syncope come on, the patient's head can instantly be dropped below the level of the body merely by withdrawing a bolt. It was the necessity of having some way of accomplishing this sudden change of position which led Dr. Bigelow to invent the chair. It likewise enables the surgeon to place his patient in any desired position. By its means, too, much less assistance is required during operations, for the patient being powerless no men are needed to hold the limbs during the excitement of the etherization. A similar chair is now in use at the City Hospital; a third is the property of Dr. Carleton, of Connecticut; a fourth was procured for the New York Hospital, by Dr. Sands; a fifth copy was made for the Empress of Germany, who heard of it from Dom Pedro, who saw the chair while he was in Boston—the Empress sent for photographs of it in order that it might be used in hospitals in Germany in which she is greatly interested. It should be in every operating amphitheater in America, and can be ordered from Codman & Shurtleff, of this city. In connection with the use of ether at the Massachusetts General Hospital, I should mention that in one of the instrument cases in the amphitheater is the first sponge ever used for etherization, a souvenir of the original painless operation, by Dr. J. C. Warren in 1846. Naturally it is an interesting and precious relic. A few years ago Dr. B. Joy Jeffries, of this city, went to England with the purpose of demonstrating the superior safety of ether and of converting English surgeons to its use. In many cases he succeeded, but chloroform is still the common anæsthetic in that country, and we are constantly hearing of deaths which have been the result of its use. The fact that chloroform was introduced by a British physician—Simpson, of Edinburg, in 1847—may have some influence in

shutting out ether. But the protests against chloroform which appear from time to time in British journals indicate that Dr. Jefries' leaven is working. Fortunately, he took several cans of good American ether with him, otherwise, unless English ether is now of better quality than formerly, I fear his success would have been less striking. In 1872 I attended a confinement case in London, during which I administered twenty ounces of the best English ether I could obtain, yet could not for one moment make my patient fully insensible. Must I add that, notwithstanding Dr. Jeffries clearly stated the purpose for which he had brought it, the English Custom House authorities *obliged him to pay duty upon his American ether!* This was next to putting a premium upon narrow-mindedness. Many physicians in Great Britain and elsewhere will doubtless be influenced by Balfour's sturdy recommendation of chloroform in his recent work on "Diseases of the Heart." Balfour considers it the remedy *par excellence* in angina pectoris, and I know of one prominent Boston physician who thinks likewise. Balfour, however, literally staggers one by saying not only that "it is *perfectly safe*" but, if so arranged as to be inhaled only in small doses, that "*it is not even necessary for a medical* man to administer it." He thinks that before the patient can inhale a large quantity the bottle will fall from his hand. From a man so generally trustworthy as Balfour such advice is amazing. I find that if a physician has had the pleasure of bringing back to life one case of chloroform syncope, he is glad thereafter to confine himself to ether. I once had that experience, and it is a frightful one, which will never be repeated at my hands. In this country I suppose Prof. Gross, of Philadelphia, is our most vigorous defender of chloroform; although he has had some startling experiences; he will use no other anæsthetic. But in spite of his strong influence the majority of Philadelphia surgeons, one might say nearly every one of them, use ether and fear chloroform. Just now, going the rounds of the medical press, the conclusions of Vergely, of Bordeaux, are newly calling attention to chloroform. This gentleman concludes that heart-disease does not contra-indicate its use; that it is a sedative in this class of diseases; that it should be used with discretion. His last clause is the only sensible one of the three,

though the second, unfortunately, is but too true in a sense more sad than Vergely means to convey. He further thinks this agent is given too timidly and unsystematically in angina pectoris and affections characterized by dyspnœa and palpitation. When one considers the history of chloroform and the number of deaths it has caused and is causing, a feeling of strong indignation is the result of reading such advice. We can only hope it may not be followed. Need I apologize for this dissertation, the length of which has been quite involuntary? I cannot easily avoid being an assailant when I see chloroform extolled by such men as Balfour, Berkeley Hill and others as perfectly safe, "*safer*," says Hill, "*than ether*." It seems to me, too, that those who realize the dangers of chloroform narcosis are not sufficiently outspoken.

You are aware, perhaps, that a system of "intersecting sewers" is now being constructed in Boston. The cost will amount to millions but the necessity was great, for imperfect drainage was committing ravages in the best sections of the city. The city engineer says that drains and sewers are constantly being uncovered whose age and primitive character are surprising. Many of them were built for single houses and have been in existence since the early portion of the century. Their condition, in frequent instances, is shockingly bad. It will interest you to know what the new system of sewerage is and what it will probably accomplish, but this matter for the present may be kept in reserve. My reference to it now is merely preliminary to mention of the somewhat unexpected revelations of the books of our Board of Health. In view of our imperfect drainage, of general complaints, in certain winds, of the presence of sewer gas in house and atmosphere, in view, too, of the accepted theory that sewer poison is a common cause of typhoid fever, we naturally might look for a large death rate from that disease. I was, therefore, surprised to observe that 1370 cases of diphtheria were reported during the year 1878 and 450 deaths, while only 120 deaths were caused by typhoid fever. The question at once arises, may we not find that sewer emanations expose us to the greater danger of diphtheria more certainly than to typhoid fever? In some instances in this city, where the patients have been treated by prominent physicians, it has been discovered that the cause of fatal diphtheria

proceeded from imperfect soil pipes. Many isolated cases have left it impossible to deny that foul gases have been the cause of this dangerous disease. If it be true that the cases which occur in Boston are the result of foul air, we can only hope there may be more typhoid and less diphtheria until the day comes when good sewerage will relieve us from both. But I have also remarked that in Boston the death rate of diphtheria for 1878 was very low, viz., 30¼ per cent. It may, therefore, be hoped, since homœopaths call every cheesy follicle diphtheria, that of the 1,370 cases reported many, let us say hundreds, were not diphtheria at all, but only follicular sore throat or tonsillitis; 1,370 cases and only 450 deaths is not the usual proportion in true diphtheria. Of scarlet fever there have been comparatively few cases, and only 68 deaths by that disease were reported during the year 1878. Our Board of Health has been unceasing in its endeavors to enlighten the people in regard to the various forms of scarlet fever. In its circular which is habitually sent to families in which this disease is reported, there is the wise warning: "Scarlet fever, scarlatina, canker-rash and rash-fever are names of one and the same dangerous disease." Moreover, the circular strongly impresses the fact that scarlet fever resembles small-pox in its power to spread rapidly from person to person. The care and arrangement of the sick-room are clearly set forth, and very sensible directions are given in regard to the period of convalescence and disposition of bedding and clothing which have been worn during the illness. The proper manner of purifying the room is likewise explained, and finally the advice is given that in case of death the funeral services should be strictly private and that the body should not be exposed to view.

A few weeks ago one of these useful and sensible circulars was returned to our Board of Health by a homœopath who had found it at the house of a patient ill from scarlet fever. The physician had enclosed the sections relating to the convalescent period, care of clothing and room, and the conduct of funerals, in brackets, with the marginal note, "Nonsense"! He had endorsed the circular as follows: "Sent to a patient of the undersigned. I will look out for the cleansing. C. F. N." This astute gentleman, I regret to say, is a graduate of the Harvard school; but since he made use of that school merely to give himself some

preparation for practice, meanwhile fully intending to be a homœopath in name, it can easily be seen that even as a student he made the discovery that he knew more than either his teachers or his books, and this discovery, evidently, is the guide of his life. It is such men as he who render the control of scarlet fever difficult, and who aid in spreading the contagion.

Another extremely wise step has been taken by our Board of Health. When it becomes known at headquarters that a person is ill of scarlet fever, the Board at once excludes from school every child in the family in which the disease has occurred. The enforced absence (save in exceptional cases) continues four weeks from the beginning of the attack, and when the scholar is re-admitted to the schoolroom, it must be on the certificate of a physician that the required time has passed. Such a course has been adopted because the Board of Health realizes that perfect quarantine is the only means by which scarlet fever can be stamped out. Of course the quarantine enforced upon families is not perfect, and for obvious reasons. But in his earnestness and thoroughness, Dr. Durgin, the genial chairman of the Board, if permitted, would have every house in which scarlet fever existed guarded by a policeman whose duty it should be to see that no one but the physician entered or left it until quarantine was removed. Supplies of food would be left at the door. To the half-hearted neutralists who, upon the whole, think scarlet fever is not particularly contagious, such stringent regulations would appear excessive, but it is a sad truth that lives are lost every year by the criminal negligence of those who come in contact with scarlet fever. This applies to physicians as well as laymen. The fixed rule of every physician should be to visit his scarlet fever patients last of all. Upon reaching his house he should take a bath and change his outer garments, hanging in the open air for several hours those he has just put off. He should likewise quarantine himself in his office, and take his meals and sleep there until he has done with scarlet fever. When a physician falls into an error of judgment, his mistakes should always be made upon the safe side, especially when questions arise concerning the proper care of contagious affections and the protection of those who are exposed to them. * *

BOSTON, April, 1879.

H.C.

ARTICLE XIV.

LETTER FROM PHILADELPHIA.

Messrs. Editors: — Medical organizations were never in a more favorable and flourishing condition in Philadelphia than they are at present. In addition to our County Medical Society, which was organized in 1848, and recently incorporated (1877), we have the Pathological Society, the Obstetrical Society, the College of Physicians, all well attended, and there are some evidences of a new organization, which shall be devoted entirely to surgery. Not long ago a resolution was passed by the County Medical Society, authorizing the formation of sections by its members, for the consideration and cultivation of especial branches; that is to say, if a dozen members interested in pathology, microscopy, laryngology, or any kindred topic, were to apply to the Society for the establishment of a section on pathology, for instance, to be called the Pathological Section of the Philadelphia County Medical Society, permission would be granted, with the understanding that it should involve no expense to the Society. Whether the surgeons who are moving in the matter will avail themselves of this or not is yet to be determined. The College of Physicians owns one of the finest medical libraries in America, deposited in a fire-proof building, in which there are several fine rooms for holding meetings, and it is in this place that the previously named societies assemble. In addition to these, there are a number of smaller medical societies, for the convenience of physicians in distant parts of the city, who are unable to attend the County Medical Society; some of them are incorporated, like the West Philadelphia Book Club, which meets regularly as a medical society, but others are simply small medical associations, existing in almost all the outlying sections of the city, and which should be really branches of the County Medical, as their objects and methods are identical. If we include scientific associations, which are largely made up of physicians, like our Academy of Natural Sciences, with its sections upon biology, and microscopy, anthropology and comparative

anatomy, and other topics cognate to medical science, it may be inferred, and correctly, that our physicians are intellectually active, and socially harmonious. It is true that the profession in Philadelphia is annoyed to a less degree by irregulars and charlatans than perhaps any other large city. One reason for this, and probably one that has acted more directly than any other to bring about this desirable state of affairs, is the fact that quacks are systematically ignored, both professionally and socially. They are treated with uniform politeness, but kept at a distance, so that no discussion or dispute may give them the opportunity of claiming popular sympathy by raising the cry of persecution. We have a board of censors to report upon all applicants for admission to the County Medical Society, but even their recommendation will not secure a man's election at the balloting. To this board are also referred all charges against members for unprofessional conduct, but no member has yet been excluded from the Society simply because he has adopted any exclusive practice; in other words, he is not hustled out because he is a homœopath, but he generally finds that the atmosphere is less congenial, and either sends in his resignation or is dropped for non-payment of dues. In this way he is deprived of a gratuitous advertisement in the daily papers as a first-water martyr, and instead of winning popular sympathy he has no notice taken of him whatever, and he retires into obscuritv. Homœopathy is drawing its last breath with us, and it is now nearly time for a new "ism" or "pathy." We should really not be surprised some morning to hear, with a great flourish of trumpets, that a brand-new medical practice has come to town, known as "electricism," or something similar, that cures all diseases without medicine, not by smelling the bottle, as recommended by Hahnemann, but by the searching and eliminating influence, say, of mystic magnetism. All other practice, of course, will at once become effete, and be stigmatized as old, or allopathic, or some other equally vague and correspondingly dreadful term.

To turn to a more congenial topic, we may refer briefly to the prospects of higher medical education. The University of Pennsylvania, having secured a moderate endowment for this purpose, has adopted a three years' graded course, and hopes soon to

establish a preliminary examination. This movement has received the endorsement of the State Medical Society, but has not met the response it deserved from the profession; although there is not the slightest doubt of its ultimate success. The Jefferson College, having a very conservative management, still clings to the old methods of lecturing, and although recommending a three years' course, it is not made an essential prerequisite for graduation. The faculty, probably without exception, are in favor of adopting a graded course, and extending it to at least three years, Prof. Gross is full of the idea, as will be seen by his action at the Convention of Medical Colleges in Atlanta.

The compliment of a public dinner, which was given to Prof. Gross by his surgical friends, at the St. George hotel, Philadelphia, April 10, 1879, in commemoration of his completing his fifty-first year in the profession, was largely attended by prominent surgeons from all parts of the country, and was a grand success.

In regard to practice and operations there is much that is worthy of note: Dr. John H. Brinton operated upon two cases of stone in the bladder by the lateral operation, recently, at the clinic of the Jefferson Medical College Hospital. One patient, a boy of nine years with a 3½ ounce urate calculus, made a good recovery; the other, a man of 56 years, died on the third day from exhaustion. There was some difficulty in extracting the stone in the latter case, as it was quite large, though soft and phosphatic, and had to be removed in fragments. It weighed four ounces and six drachms, and the operation was therefore unusually prolonged. In a case of a stone weighing over five ounces at the Woman's Hospital, colpo-cystotomy was recently performed, and the calculus perforated with a drill run by Bonwitt's dental engine, the stone was then easily crushed and removed. This patient died shortly afterward of abcess of the kindeys, but it was stated that the bladder, at the post mortem, was found to be in good condition.

Dr. John B. Roberts recently read a paper on paracentesis of the pericardium before the County Medical Society, and stated that he had collected nearly fifty cases, and the percentage of recoveries was nearly 47 per cent. He considers the operation

perfectly justifiable, and advocates the use of Fitch's dome-trocar, with the aspirator, the fifth intercostal space being selected at a point one and a half inches to the left of the line of the mid sternum.

Hot Water as a Parturifacient, was the title of a paper read at the same meeting by Dr. Albert H. Smith, who has had large experience, and states that hot water injections should be used in every case of obstetrics. In the first stage of labor, it stimulates the uterus, and facilitates delivery; after parturition, it cleanses the canal and vagina, causes prompt, firm and persistent uterine contraction, and is the best agent for checking post-partum hæmorrhage known, used at a temperature of 46° to 49°, and thrown *not into the uterus, but against the cervix*, with a Davidson syringe, or a tube and funnel. After delivery, he had found hot water injections to completely relieve after-pains. He had also used it in ordinary menorrhagia with great satisfaction, and in cases of labor when he had reason to anticipate flooding, he was in the habit of using it in the first stage as a preventive, and with astonishing success.

The State legislature has again failed to pass the bill authorizing the formation of a State Board of Health.

With the exception of an epidemic of influenza in February and March, the city has been unusually and distressingly healthy for nearly a year; during 1878, there was not a single death from small-pox in Philadelphia. W.

PHILADELPHIA, April, 1879.

ARTICLE XV.

BATTERY HINT.

No one who has used to any extent the Galvanic Battery, either for the purpose of cautery or for the general effect to be produced on the constitution, will ignore the value of any suggestion by which the constancy of the current can be improved.

The testimony of electricians on this subject is well illustrated by the fact that the relative constancy of the current of any

battery is an item of great importance in the estimation of the value of said battery.

Again, any device that will dispense with the necessity of amalgamating the zincs will be, to the majority of physicians, a great source of satisfaction.

I desire to make more public a device which will greatly increase the constancy of the current, and entirely dispense with the necessity of re-amalgamating the zincs. The idea is not original with me, but in the course of conversation with several who are very familiar with the use of the battery, I have found it so little known, that I have thought it a sufficient excuse for publication. The device consists simply in the addition to the ordinary battery-fluid of a certain quantity of the bisulphate of mercury. The amount given by Gaiffe of Paris, to whom I am indebted for the idea, is four or five grams of the bisulphate of mercury to the liter of the regular sulphuric acid and bichromate fluid. Of course it is necessary to amalgamate the zincs before commencing its use. They will then remain amalgamated. I have used this for some time, and had the pleasure of recommending it to another physician in the city. The marked improvement which he has obtained in the constancy of his current and the satisfaction which he feels in not having to re-amalgamate his zincs, inspires me to affirm that any physician who once adopts this modification, will continue its use.

R. TILLEY, M.D.

CHICAGO, April, 1879.

MEDICAL gentlemen in this country who have contributed to the literature of the throat, voice, etc., are requested to send copies of their articles, or at least the titles, to Dr. Louis Elsberg, 614 Fifth avenue, New York.

SUBSCRIBERS of this journal will confer a great favor by sending to Rush Medical College any of its announcements of a date previous to 1850; also those for the years 1854–55, 1861–62, and for 1875–76.

Reviews and Book Notices.

ARTICLE XVI.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By Louis A. Duhring, M.D., Professor of Diseases of the Skin in the Hospital of the University of Pennsylvania, etc., etc. Philadelphia: J. B. Lippincott & Co., 1877.

AN ATLAS OF SKIN DISEASES, By Louis A. Duhring, M.D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania, etc. Part I, Eczema (Erythematosum), Psoriasis, Lupus Erythematosus, Syphiloderma (Pustulosum). Part II, Acne Rosacea, Ichthyosis (Simplex), Tinea Versicolor, Sycosis (Non-Parasitica). Part III, Eczema (Squamosum), Syphiloderma (Erythematosum), Purpura (Simplex), Syphiloderma, (Papulosum et Pustulosum). Part IV, Vitiligo, Alopecia Areata, Tinea Favosa, Eczema (Rubrum).

A HANDBOOK OF THE DIAGNOSIS OF SKIN DISEASES. By Robert Liveing, A.M. and M.D., Cantab., F.R.C.P., London, etc., etc.: New York, William Wood & Co., publishers, 1879.

NOTES ON THE TREATMENT OF SKIN DISEASES. By the Same. Fourth Edition, revised and enlarged. New York: William Wood & Co., publishers, 1879.

It is usually the part of the critic and reviewer to pronounce, in advance of the public, upon the merits or demerits of the work submitted to him. It is true that his decision, one way or the other, may have but little to do with the success of an author, as compared with that eagerness for everything possessing real value, which is, sooner or later, sure to manifest itself on the part of the reading public. Still the critic has usually the im-

mense advantage of the master of ceremonies at the formal introduction.

In the present instance, this usual order is reversed. The book before us has been long since presented to the public, and passed upon without reserve by the members of the medical profession. Fortuitous circumstances, which it is not here necessary to describe, have thus far prevented us from doing justice, in the pages of this journal, to the book itself, or to its considerately patient author and publishers. At this late date, it merely remains for us to record that seal which has been already set upon Duhring's treatise, by worthier and more competent judges.

Needless to say, here, that that seal has been one of approval. We might well, at this point, conclude all that remains to be said upon the subject, by quoting the recorded verdict of the press, that this is "the best treatise on diseases of the skin in the English language." But lest this should be thought the exaggeration of personal friendship or favoritism, we are ready to give the grounds for our opinion.

Every work of art of high order, is so intrinsically good that its excellences have to be ascertained by analysis. The volume before us is fully as valuable for what it is not, as for what it is.

We remark, then, that it is an original treatise and neither a compilation of previously published sketches nor a series of clinical observations, nor an argument upon one side of a disputed question, nor yet an ingenious mosaic of the opinions and writings of other men. It is a systematic treatise, without either the diffuseness or incongruity of so many of its predecessors. It is a carefully written book, without that absurdity of style, half conversational—half declamatory, which is so offensively prominent in an English author upon the same subject, whose book has attained some prominence in this country. Lastly, it is preeminently a book for the student and the practitioner. From it they can acquire the elementary as well as the practical and the scientific knowledge, that are essential to the successful recognition and treatment of diseases of the skin.

Dedicated to the eminent Hebra, of Vienna, we are prepared to find that the work of our author largely represents the views of the German school, both as to the anatomico-pathological

classification of the diseases of the skin, and as to the mode of their treatment. In both respects, however, the modifications here effected are on the side of a conservative recognition of those diseases which are unquestionably of constitutional origin, while the extreme opinions of the French and a few English and American authors, who hold to the existence of "dartres" and "rheumides," and who look upon eczema and psoriasis as evidence of a diathetic vice, are unreservedly rejected.

The clearness and simplicity resulting from the embodiment in these pages of only those facts which are capable of clinical demonstration, give them a charm and value which constitute the basis for the actual success of the book. Take, for example, the subject of impetigo:—

Willan and Bateman were early in the dust and confusion about this term. What time they confounded impetigo with porrigo, and the reverse, they described six varieties of each disease. Alibert, as is well known, in his early classification described the disease, first, in connection with acne, as a "pustular dartre," afterward as a "pustular crusted psoride"; and in his later classification it reappears under successive titles, as an "eczematosis," a "phlyzacion," a "melitagra," and a "tinea." Cazenave and Schedel upon this point say:

"The eruption (impetigo) is pustular from the beginning, and the pustules are small, confluent, and very slightly raised above the level of the skin. They burst between thirty-six and seventy-two hours from their formation, and discharge a purulent fluid. The heat, itching and tension are then increased. The fluid is abundantly discharged by numerous small orifices; it soon dries up, and forms thickish, yellow, friable, semi-transparent incrustations, which have some resemblance to the gummy exudations of certain trees, or to layers of concrete honey."

There are few men, even with the most superficial knowledge of dermatology, who will fail to recognize in this description the features characteristic of a well-marked form of eczema. And yet they do not "do these things better in France" to-day. Thirty years after this paragraph was penned, Guibout writes in Paris as follows (1876):

"Impetigo is characterized by the existence of small, short-

lived fugacious, acuminate, confluent pustules, seated upon a more or less extensive erythematous surface, secreting a pus which continues to be formed after their disappearance, by ulcerated surfaces which succeed them, and which conclude by forming moist, yellow, projecting, irregular crusts, of the color of honey or marmalade of apricots."

Hebra, as is known, entirely rejects the term, impetigo, from his classification of diseases of the skin. In a chapter entitled "pustular eruptions," he gives fully his reasons for this course, and, if he had never done anything else for dermatology, he would have deserved the honor he has been accorded, for his masterly treatment of this subject alone. He recognizes the fact that the pustule is a resultant of an inflammatory process; that the inflammatory process we call, eczema, may result in the formation of a pustule, or a puriform discharge; and that the existence of a pustule upon the skin, is no evidence whatever, *per se*, of the existence of any special disease, since it may be the indirect result of the bite of a louse, or of the external application of croton oil. In his own language: "the pustular affections of the skin described by authors, under the names, impetigo, ecthyma, porrigo, achor, etc., have no existence as independent diseases."

We have made this short excursion merely for the purpose of showing how simply, and yet how admirably, one author leads us straight through this forest of perplexities, by a sure path. Under the head of "pustular exudations," we find the word, impetigo, in Duhring's classification; and the disease in proper place, is thus defined: "Impetigo is an acute, exudative disease, characterized by one or more pea or finger-nail sized, discrete, rounded and elevated, firm pustules, unattended by itching, occurring, for the most part, in children." The four pages of descriptive text which follow, portray in detail a disease whose identity is demonstrable by daily clinical experience, and which is assuredly very different from eczema rubrum or eczema pustulosum. The lesions are pustular at the outset, have a slight areola, are not umbilicated, are constituted of the entire thickness of the epidermis, *have no disposition to rupture*, are discrete, vary in number from a dozen to more, are not attended with either itching or burning, as a

rule, and their contents may undergo reabsorption or crusting. Surely the most casual reader of these lines, can here follow the keen and practised eye of a master, who has the courage to depart from under the shadow of the high authority of the great Vienna dermatologist without wandering into the mazes and mysticisms of the French school.

In order to make our picture more complete, let us turn for a moment to Duhring's description of eczema pustulosum, where we shall find a history of the exact lesions, whose shadowy ghosts have been flitting for years in the pages of Willan and Bateman, Cazenave and Schedel, Biett, Alibert, Guibout, and many others. The text is as follows:

"The pustules are formed in the same manner as the vesicles which have been described, except that there is not the same amount of swelling, heat and itching present. The pustules are apt to be somewhat larger than the vesicles, and are, as a rule, firmer in consistence. They develop as pustules, or, as is often observed, they become pustules from vesicles; again, both lesions may exist at the same time, side by side, upon one individual. A strict line cannot be drawn between vesicles and pustules. As in the case of the vesicles, the pustules burst, and are replaced by thick, bulky, greenish, yellow or brownish crusts, which are apt to cover the skin completely. If this process continue, they accumulate in quantity, causing great disfigurement. They desiccate quickly, and become friable, and finally fall off or crumble away."

And thus might we discourse of each of the topics in the treatise. In connection with each is to be noted that same exactness of definition which results from distinctness of conception, the same avoidance of ambiguity and unsettled or disputed questions, the same straightforward progress over a well-built roadway, upon which the traveler passes without dreaming of the wrecked theories which are lying at the bottom.

The style of the author is conspicuously clear and pleasant, for the same scholarly care which has been made evident in his definitions, is here to be recognized. The same is true of the typographical appearance of the work, which, as is well understood, is in this respect quite singular. During the months which have

elapsed since they were first given to the profession, we have frequently consulted these pages, and have never yet detected an error in typography or syntax. The plates are well drawn, and the publishers have well executed their part in the production of the treatise.

We conclude, as we began, by expressing our conviction that this is the best treatise on diseases of the skin in the English language, judged from every standpoint. We are even willing to say more than this. Well would it be for the medical literature of our land, if the standard of even its best representatives might never be less than that evidently upheld by our young and gifted author.

DR. DUHRING'S ATLAS OF SKIN DISEASES is a fit companion of the other work of his hand. We have, upon another occasion, referred in these pages to the excellence of these plates, and can here no more than iterate our former praises.

The faithfulness with which the disease is, in each instance, portrayed, is due to no fortuitous circumstances. Like every other worthy accomplishment, it is the fruit of the author's careful and conscientious labor. From the selection of the individual case whose lesions are to be reproduced, to the work on the canvas (where the author frequently applies the finishing touches with his own hand), to the multiplication of the stones (the lithographer having a *carte blanche* order to employ as many as are necessary in order to reproduce exactly the different colors of the original picture), and even to the actual printing of the final impressions, each and every step is under the same watchful supervision and superintendence. It is in consequence of this care and expenditure of time and money, that the plates are equal to any that have yet been published.

The explanatory text accompanying each, is a clear and sufficiently brief exposition of the case selected for illustration, and the treatment pursued, with its results.

The only adverse criticism we have yet seen of this work may be adduced in support of its extraordinary value. An English writer, in reviewing Dr. Duhring's atlas, complained that, while the author had ostensibly undertaken to represent distinctively

American types of cutaneous disease, his plates yet represented quite exactly the individuals effected with eczema, acne, etc., who were to be encountered every day among the patients and out-patients of the London hospitals. Surely no higher commendation than this could be pronounced. While it may be true that the prurigo, xeroderma, pityriasis rubra, lichen scrofolosus, and some other of the diseases seen in the Vienna wards, are rare in America, it is equally probable that the disorders of the skin observed in the two great English-speaking countries, are more similar than those of any other two widely separated people.

As the stones from which these admirable plates are printed, are to be eventually destroyed, it is evident that the value of this atlas will increase with each year.

DR. LIVEING'S SMALL VOLUMES are sufficiently compact to be stowed into the pocket of the student as he goes through the wards of a hospital, or attends a dermatological clinic. The aim of the author has been, "to call attention to the peculiarities and distinctive points which enable us to form a sound and rapid diagnosis." It is a question with us, however, whether a "rapid diagnosis," can be generally considered "sound," in actual practice. And again, has not he who is capable of making a sound and rapid diagnosis, usually advanced far beyond the teachings of the manuals of this class; while the student confronted with his first case of skin disease, is usually incapable of making any diagnosis whatever?

Books of this sort remind us ever of the doll-houses seen in the windows of the toy-shops. As one inspects them, he finds they are thoroughly furnished in all particulars. Each article too, is in its right place. Everything requisite for the *ménage* is there in miniature. The only objection to the whole, is that it is *too small to be practically useful.*

We remark, however, that Dr. Liveing's books exhibit a commendable familiarity with the subjects under discussion, a familiarity with the writings of even American authors, which has until lately, been rarely noted among our English cousins. The little volumes will prove popular with that class of practitioners, who desire to find their literature of this subject compressed in the smallest possible compass. J. N. H.

ARTICLE XVII.—MEDICAL AND SURGICAL ELECTRICITY. By Beard and Rockwell. William Wood, & Co., 1878.

There is probably no American work on electricity that has received the approval of the profession to such an extent as has this work. In the first edition of this work there were faults which were open to severe criticism, but most of which have been corrected in this new edition. New chapters have been added, and the whole work has been so thoroughly revised, that the physician who employs electricity in the treatment of disease can ill afford to be without it. The work is divided into the following sections: Electro-physics, Electro-physiology, Electro-therapeutics and Electro-surgery.

Under the first division the physics of electricity are given as exhaustively as any medical man would require. On page 2, this statement is made: "Electricity is manifested in three general forms: *magnetism*, *statical* or *frictional* or *Franklinic* electricity, and *galvanism* or *voltaic* or *dynamical* electricity." On page 34 it is stated that: "If we start with magnetism, we find that it produces electricity, and through electricity, heat, chemical action and light." * * * "If we start with electricity, we find that it produces magnetism, heat, light, chemical action and motion." In the first statement, electricity and magnetism are held to be one and the same force, or rather that magnetism is a form or manifestation of electricity. In the second, it is reasonable to infer from the text, that they are held to be different forces, just as light and heat are different. Although electricity and magnetism are more nearly co-related than the other forces, and have much in common, we are not inclined to accept these forces as being one and the same on the evidence already adduced; notwithstanding some eminent physicists think the time is not far distant when they will be proven to be one.

The statement: "The popular notion that large cells have a therapeutic advantage over small cells by sending a larger quantity of electricity through the body, is, in the light of Ohm's law, as well as in the light of experience, erroneous," is well worth the attention of physicians.

Beard and Rockwell do not stand alone in this statement.

Poore—one of the more recent English authors—makes a similar assertion.

They also state that: "It follows that the dose of an electrical application cannot be accurately described by stating the number of cells and the length of the sitting." "Supposing, now, that we are treating a patient locally or centrally by the galvanic current, and we desire to transfer the patient to another physician; we inform the physician to whom the transfer is made, that we are treating the patient with ten cells for ten minutes, and we desire that he should continue to give the same dose. * * * In our very attempt to be accurate we stumble into gross inaccuracy. Had we left the whole matter to the judgment of the physician, with some general suggestions as to the susceptibility of the patient, we should have come far nearer the truth." The fallacy this assertion points out and attempts to correct, is a fallacy that physicians little acquainted with the application of electricty are apt to take up, and is one that all thinking electro-therapeutists have many times demonstrated, to their own satisfaction, to be as untrue as our authors make it. Beard and Rockwell insist with equal truth that the efficacy of an electrical treatment depends as much or more on the mode of administration as on the dose of electricity administered.

The authors lay great stress on the necessity of a complete and thorough knowledge of the construction of the apparatus as well as the chemistry of the battery—a fact well worthy the attention of all who employ electricity.

Electro-physiology is also very fully treated of, and cannot fail to be of interest and benefit.

Under the head of electro-therapeutics, the history of electrical applications, electro-diagnosis, the apparatus for therapeutic use, and the treatment of disease, are given.

This important division occupies more than one-half of the volume. Various cases from practice are given to illustrate the modes of treatment in individual cases. A full and exhaustive review of all of the scientific methods of electrical treatment is also given.

Among the many excellent suggestions found in the chapter on "General suggestions," we cull the following: "Electricity is

a powerful *stimulating sedative tonic.*" "The old notion that electricity was merely a stimulant aided in forming in the professional mind another very gross error, that in active inflammations electricity is contra-indicated. Experience proves every day that the sedative effects of electricity are exceedingly grateful even in the acute stages of sprains and diseased joints." "The best results of electrical treatment are usually obtained with mild currents," and "Even at this advanced stage of electro-therapeutics, it seems to be necessary to constantly warn the profession against indiscriminately intrusting the details of electrical applications to the nurses, friends of patients, and patients themselves. Having just rescued this department from the hands of the laity, and given it a position among men of science, it seems strange that those physicians who are familiar with the subject, should even now use their influence to return it to the people at whose hands it formerly suffered so much; to restore it to the captivity of prejudice and ignorance." The limits of this review warn us that we have made as full extracts as would be proper, and those who wish farther light on the subject must read the book for themselves.

In this edition is introduced a chapter on "central galvanization"—a most valuable method of employing galvanic electricity in certain forms of nerve-exhaustion, skin diseases, etc.

The section on Electro-surgery treats of electrolysis and the galvano-cautery.

In reading this book, we have found many facts stated, which every physician, who has had a large experience with electricity, has discovered, and which he may think, as we did, were unknown until we read the statement of facts in these pages. There is probably no work in the English language, which deals with this subject, that covers so much ground and is so free from error as is this work. It is thus fitted in every respect to be a standard work on medical electricity.

Before leaving the subject, we can but in justice refer to some of the new methods of electrical treatment and of electro-physics as related to physiology and therapeutics, which these authors were the first to present to the medical profession. They have explained Ohm's law in reference to physiology and therapeutics,

have originated "general faradization," "central galvanization," have shown the efficacy of the galvanic current in the treatment of skin diseases, and in electro-surgery of that method known as "electrolysis of the base."

P. S. H.

ARTICLE XVIII. — ATLAS OF DISEASES OF THE MEMBRANA TYMPANI. By H. Macnaughton Jones, M.D., etc. Philadelphia: Lindsay & Blakiston, 1878; Chicago: Jansen, McClurg & Co.

This atlas, the author tells us, is intended as an accompaniment to his treatise on Aural Surgery, and the description of the diseases illustrated is, with some slight modifications, taken from that work. The atlas contains six chromo-lithographic plates of nine figures each, intended to illustrate the membrana tympani and some of its diseases and two plates, one of four and the other of five drawings of diseases of the external ear.

Were we to judge of the merits of this work from the author's own estimate of it, as expressed in his really gushing preface, we certainly should have little to criticise. The great diversity of appearance that the membrana tympani may present in each of the affections involving this structure, renders it difficult to say whether the drawings of the diseased conditions here presented, are faithful representations or not. But the author has given us a drawing of a normal membrane (fig. 6), and this should be a standard by which to estimate the value of the other drawings. Let us examine it. According to the author's own description, "the healthy membrana tympani varies in color from a 'pearl' or 'neutral gray,' to a yellowish white, or at times even an ivory white." His drawing of the normal membrane is neither of these shades, but a light blue. If the drawing is intended for the left membrane, the long diameter is shown as being in the direction backwards and downwards. The handle of the malleus appears as occupying the middle third of the long diameter. What we suppose is intended to represent the short process of the malleus, is about as far from the anterior and upper edge of the membrane as the tip of the malleus is from the posterior and lower edge. No trace of the anterior ligament of the malleus is shown. We are glad the author has told us that

figure 6 represents a normal membrane, for we certainly would not have recognized it as such.

Fig. 31, "Old Eustachian case. Membrane very white, etc." If the membrane in this figure is white, then we must be color-blind, for it does not appear so to us.

Fig. 55, an abscess in external meatus. Fig. 56, Polypus protruding from meatus. It would be difficult to tell from the drawings which is the abscess and which the polypus.

The chromo-lithographs may do credit to artists in that line in Cork, where according to the author, there was the first attempt to lithograph drawings. In this country where the chromo is offered as a premium or inducement to purchase anything, from a pound of tea to a corner lot, the art has made greater progress, and our standard of creditable work is much higher. An atlas of aural diseases, is to the student of these diseases, what the map of a country is to the student of the geography of that country. It aids him if correct, but confuses and misleads him if incorrect. In our opinion the work before us comes under the latter clause. W. T. M.

ARTICLE XIX. — DISEASES OF THE BLADDER AND URETHRA IN WOMEN. By Alexander J. C. Skeene, M.D., Professor of the Diseases of Women in the Long Island College Hospital; Fellow of the American Gynæcological Society; Corresponding Member of the Gynæcological Society of Boston; Member of the Medical Society of the County of Kings, and of the Obstetrical Society of New York. New York: Wm. Wood & Co., 1878; pp. 375.

The author divides this book into eight chapters, their subjects being as follows:

Chapter I.—Anatomy of the Bladder and Urethra, and their Malformations.

Chapter II.—Functional Diseases of the Bladder. Irritability. Paresis. Ischuria. Enuresis. Disorders due to Diseases of other Pelvic Organs. Disorders from Anomalies of Form and Position of Bladder. Extroversion through the Urethra.

Chapter III.—Organic Diseases of Bladder. Urinary Analysis and Exploration of Bladder. Hyperæmia. Hæmorrhage.

Chapter IV.—Cystitis, Sub-acute, Chronic, Catarrhal, Interstitial, Croupous, Diphtheritic, Gonorrhœal, and Peri and Epi-Cystitis. Etiology, Pathology and Symptomatology.

Chapter V.—Treatment of Cystitis. Croupous and Diphtheritic Cystitis. Cystitis with Epidermoid Concrement. Vesico-Urethral Fissure.

Chapter VI.—Neoplasms, Cysts, Tubercle and Carcinoma of the Bladder. Foreign Bodies. Hypertrophy and Atrophy and their Etiology, Pathology, Symptomatology and Treatment.

Chapter VII.—Urethral Diseases. Neuroses. Urethritis, Acute, Chronic and Gonorrhœal, Circumscribed and Sub-acute. Neoplasms. Vascular Tumors. Areolar, Epithelial and Compound Neoplasms and their Symptoms, Diagnosis, Etiology, Prognosis and Treatment.

Chapter VIII.—Urethral Dilatations and Dislocations. Prolapsus of the Mucous Membrane. Foreign Bodies in Urethra. Stricture. Incomplete Fistula in Urethra.

We can heartily commend this work to physicians. A medical library is not complete without it, because it seems to be the best work on the subjects treated, now before the profession.

J. H. E.

ARTICLE XX. — ON THE SURGERY OF THE FACE. By Francis Mason, F.R.C.S., Surgeon and Lecturer on Anatomy at St. Thomas' Hospital, etc. With one hundred illustrations. Philadelphia: Lindsay, Blakiston & Co., 1879. Chicago: Jansen, McClurg & Co., pp. 170; price $2.25.

This volume comprises the three Lettsomian lectures delivered by the author in the early part of last year, and at the time published in the *London Lancet*.

The first lecture is devoted to the diseases, the second to injuries, and the third to the deformities of the face.

We cannot expect that this subject could be exhausted in three lectures, nor had the lecturer any such object in view. He rather intended to give a brief review of the whole field; but his vast experience lends to every page the attractions of a mature judgment. We will content ourselves with a single quotation in order to give our readers an idea of the author's style of writing.

Speaking of the operation of hare-lip, he condenses volumes of instruction on plastic surgery in the following remarks (p. 102): "The hare-lip pin with the twisted suture, is commonly employed to bring the edges together, but, without discarding this method of approximating the parts, I feel sure that the usual interrupted suture of silk may in most cases be employed with great advantage, and, I believe, with certain precautions, it is in many instances preferable; but whether the twisted or interrupted suture be used, the success of the operation mainly depends, first, on the soft parts being thoroughly freed from the subjacent bone; secondly, on the edges of the fissure being so pared that a good, broad, raw surface is left; and thirdly, on the patient being incessantly watched for three or four days by a skillful nurse, who should support the newly united surfaces by making continuous but gentle pressure on each cheek. I have little confidence in the use of mechanical appliances *after* the operation; for, in nursing the child, they are apt to shift their place, and often do more harm than good. They are, however, invaluable as aids in bringing the two superior maxillæ together if worn *before* operative procedure is undertaken. Again, strapping is of especial service before the operation, but afterwards it cannot be with safety solely relied on."

The context is profusely illustrated, and a very complete index renders the reference to any subject of its contents an easy matter.

F. C. H.

ARTICLE XXI.—SORE THROAT, ITS NATURE, VARIETIES AND TREATMENT; including the Connection between Affections of the Throat and other diseases. By Prosser James, M.D., M.R.C.P., Lecturer on Materia Medica and Therapeutics at the London Hospital; Physician to the Hospital for Diseases of the Throat; late Physician to the North London Consumption Hospital. Third edition. Lindsay & Blakiston, Phila.

This is a small book of about three hundred pages, by the author of the little work on the use of the laryngoscope, which was so favorably spoken of in these pages a few months since. The first edition was published in 1860, and it was at that time,

and continued for about three years to be the only English book on the laryngoscope.

The subjects treated of are handled in a concise and lucid manner, which renders the book especially valuable to those physicians who have not the time to make themselves thoroughly familiar with laryngoscopy. The first chapter is devoted to a consideration of the nature and varieties of sore throat; the second to diagnosis of throat affections with the aid of the laryngoscope, and the third to the general therapeutics adapted to this disease. Following them are chapters on inflamed, ulcerated, follicular, aphthous and fungous sore throat. Also chapters on the soft palate, tonsils, pharynx, larynx, laryngeal phthisis, etc., etc. The book contains twelve colored illustrations of diseases of the larynx, and several wood cuts which illustrate the use of the laryngoscope.

The praise we gave the little work on the use of the laryngoscope would apply equally well to this book, but the criticisms on the letter press of the former are fortunately not deserved by this; though we are still left to regret that a book so well written should be illustrated by such poor cuts, however, as we do not expect the exhibition of very high art by the wood engraver, we feel justified in highly recommending the work; for although the cuts are rough, they answer fairly the intended purpose.

E. F. I.

ARTICLE XXII.—A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY. By W. S. Playfair, M.D., F.R .P With notes and illustrations by Robert P. Harris, M.D. Second Amer. from second London Ed. Phil.: H. C. Lea, 1878.

The success of this work, requiring a second edition so soon after the issue of a very large first, is proof sufficient of a popularity that could hardly have been obtained, had it not possessed many points of real excellence. It is not difficult to recognize wherein lies the particular value of the book. Though lacking in explicit details and originality, it is nevertheless a valuable text book for the student of midwifery because of its conciseness. Briefly and clearly written, it presents to the reader a comprehensive history of obstetric science to-day.

The first chapter devoted to "The Bony Pelvis and Pelvic Measurements," is particularly good, and illustrated in a way to compare with any similar work. While in that which relates to conception and generation there is such a prolific exhibition of new terms, that we are afraid the student may lose his way from an imperfect understanding of the matter. One of the best portions of the work is that part of the chapter on forceps, written by the American editor, in which he takes exception to the author's imperative instructions to lay the patient on the left side, and upholds the American method, as well as gives a description of the most popular instruments in this country.

We see here mentioned in terms of praise the forceps of E. Warren Sawyer, of this city. He also writes at considerable length on the Cæsarean operation, dystocia from tetanoid uterine constriction, and intra-venous injection of milk as a substitute for the transfusion of blood. In all of these his style of expression, as well as his plain and logical treatment of the different subjects, compare more than favorably with the corresponding parts of the same chapters written by the author, and make us almost wish that he had written more of the book. The student and the young practitioner will buy this work because it is cheap, compact and comprehensive, even though the older heads will not praise it because they find nothing new in it.

F. C. H—N.

ARTICLE XXIII.—PHYSIOLOGICAL THERAPEUTICS: A NEW THEORY. By Thomas W. Poole, M.D., M.C.P.S. Ontario: Pub. Toronto News Co.

This is a little work of 231 pages. The author has evidently read carefully and with judgment the most noted physiological and therapeutical writers; but whilst noting well the facts they record, and digesting their theories, he has not at all times coincided with them. To illustrate this statement, and at the same time to set forth the author's views in the most concise form, we cannot do better than quote direct from the introduction, four of the six general principles asserted. The burden of proof of these several principles constitute the book.

"1. The muscles and muscular tissues, generally, of the

body are endowed with an inherent contractile power of their own, independent of nervous influence; but this contractile power of the muscles is regulated for voluntary purposes through the agency of the nervous system.

"2. The influence exerted by the nervous system in its relation with muscular tissue, is that of a *restraining*, and not that of a compelling power. Nerve force, then, so far from being the ally, is the direct antagonist of muscular contractile power, and the latter displays itself to the best advantage in proportion as the influence of the former is withdrawn.

"3. Electricity is not a stimulus to nerve or muscle. On the contrary, its action is that of a sedative, anæsthetic and paralyser to nerve tissue. It is through this quality of its action that it soothes pain, whilst its tonic effects depend solely on the indirect improvement in nutrition brought about by an infinite number of contractions and relaxations of muscular fiber.

* * * * * * * * * * *

"6. Certain drugs, by modifying the activity of the vasomotor nerves (increasing their power by nutritive changes in the cells which generate nerve force, or paralysing the nerves themselves, and so arresting their functional activitity) cause an increase or diminution of the caliber of the blood-vessels, and so exert an important influence, not only over the nutrition and temperature of parts, but in controlling congestive and inflammatory processes, and so restoring normal circulatory activity."

The fourth and fifth general principles which we have omitted in the extract, are for the most part embraced in those we have quoted, but apparently put into relief in order to elucidate that part of the subject more fully. We should scarcely be granted space enough to review extensively the line of argument which our author adopts. Suffice it to say that he quotes frequently from Drs. Carpenter, Anstie, Beard and Rockwell, B. W. Richardson, Ringer, Kuss, Klein and numerous others, in order to show the contradictions to which writers are driven in endeavoring to explain the *modus operandi* of electricity and drugs on what may be called the orthodox theory.

The theory which the author suggests, is certainly simple, and it is our opinion that he has succeeded well so far as he has gone

in supporting the theory. The style is clear, and whilst it sometimes appears that a repetition frequently occurs, it is really only in appearance. We sincerely recommend the work to all who seek for an intelligent understanding of the modus operandi of the instruments they wield. In prospect of a second edition, we would recommend to the author the "Journal of Physiology," published in England. A thorough study of the experiments so carefully detailed therein, will enable him either to correct himself, or to convince others; perhaps a little of both.

The publishers have scarcely done the author justice.

R. T.

BOOKS AND PAMPHLETS RECEIVED.

Epitome of Skin Diseases, with Formulæ for Students and Practitioners. By Tilbury Fox, M.D., F.R.C.P., and T. C. Fox, M.B., B.A. Sec. Amer. Ed. Cl., pp. 216. Phil.: H. C. Lea; Chic.: Jansen, McClurg & Co.

Lectures on Practical Surgery. By H. H. Toland, M.D. Sec. Ed. Illustrated. Cl., pp. 520. 1879. Phil.: Lindsay & Blakiston. Chic.: Jansen, McClurg & Co.

The National Dispensatory. By Alfred Stillé, M.D., etc., and J. W. Maisch, PH. D. Leather, pp. 1628, 1879. Phil.: H. C. Lea; Chic.: Jansen, McClurg & Co.

A Clinical Treatise on the Diseases of the Liver. By Dr. F. Theo. Frerichs. In 3 vols. Vol. I. Translated by Ch. Murchison, M.D. Cl., pp. 224. 1879. New York: W. Wood & Co.; Chicago: W. T. Keener.

The Diseases of Live Stock and Their Most Efficient Remedies. By Lloyd V. Tellor. M.D. Cl., pp. 469. 1879. Phil.: D. G. Brinton.

Physiological Therapeutics—A New Theory. By Thos. W. Poole, M.D., M.P.C.S., Ont. Cl. Toronto: Toronto News Co.

A Manual of the Examination of the Eyes. By Dr. E. Landolt. Translated by Swan M. Burnett, M.D. Cl., pp. 307. 1879. Phil.: D. G. Brinton.

The Principles and Practice of Gynæcology. By Thos. Addis Emmet, M.D., etc.; 100 illustrations. Cp., pp. 855. 1879. Phil.: H. C. Lea.

Pathological Report of Montreal General Hospital, 1876–7. Montreal: Dawson Bros.

A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M.D., etc. Fourth Ed., thoroughly revised. Cp. 8vo, pp. 758. 1879. Phil.: H. C. Lea.

A Guide to the Qualitative and Quantitative Analysis of Urine, designed for Physicians, Chemists and Pharmacists. By Dr. G. Neubauer. (Translation.) Revised by Ed. S. Wood, M.D. Leather, pp. 551. New York: W. Wood & Co.

Report of the U. S. Marine Hospital Service, 1876–7. Cl., pp. 213. 1878.

Address delivered before the American Academy of Dental Sciences at their Eleventh Annual Meeting held at Boston, Oct. 30, 1878. By Chas. M. Eliot, LL.D.

Oyster Shuckers' Corneitis. Reprint from *Virginia Medical Monthly*, Feb., 1879. By W. J. McDowell, M.D.

Influences of Altitudes on Consumptives. By J. Hilgard Tyndale, M.D. Reprint from *St. Louis Courier of Medicine.*

Valedictory Address to the Graduating Class of Jefferson Medical College at the Fifty-fourth Annual Commencement, delivered in the Academy of Music, March 12, 1879. By J. A. Meiggs.

The Causes of Sudden Death of Puerperal Women. An Address in Obstetrics and Diseases of Women and Children, delivered before the American Med. Ass'n, June 5, 1878.

Opium as a Tonic and Alterative and its Hypodermic Use in the Debility and Amaurosis Sometimes Consequent upon Onanism. By B. A. Pope, M.D.

The Treatment of Dropsy of the Gall Bladder by Operation (Cholocystotomy), with Notes of a Successful Case. By G. Brown, M.R.C.S., L.S.A. Reprint from *British Med. Journal.*

A Letter to Thomas P. Rogers, of the Twenty-eighth Representative District, in the Thirty-first General Assembly of the State of Illinois. By Andrew McFarlane, M.D.

Constitution and List of Members of the American Public Health Association.

Maternal Impressions; Mothers' Marks. An Exposé of a Popular Fallacy. By Roswell A. Park, A.M., M.D. Rep. from *Southern Clinic*, Feb.. 1879.

The Etiology and Pathology of Chronic Joint Disease. By Newton M. Shaffer, M.D. (Series of American Clinical Lectures. Edited by E. C. Seguin.

Translations.

ARTICLE XXIV.

COCCOBACTERIA SEPTICA. OBSERVATIONS MADE BY DRS. TH. BILLROTH AND F. EHRLICH. (*Archiv. für Klinische Chirurgie.* Vol 20th, part 2d.) Translated from the German by J. W. DAL, M. D.

Observations concerning the occurrence, further development, and course of coccos vegetations in completely closed abscesses.

I have for more than a decade, advanced the opinion, and endeavored to confirm the same, by my clinical experience, that the wounded always infect themselves from their wounds, resulting either in febrile or pyemic action, as the case may be, and that therefore, above all things, wounds must be treated very carefully, especially protected from irritation and infection. It is to be hoped that from the following observations, I shall not be accused of underestimating the dangerous causes which may act upon wounds from without. I have also in my work upon coccobacteria, shown clearly enough, that these little vegetations can carry within or affix to themselves, inflammatory or any other variety of infectious ferments, and because of their ubiquity, and especially their rapid propagation, in badly ventilated rooms provided for the wounded, become the most dangerous carriers of those ferments. Frisch* has proven through his extensive investigations, that the taking of inflammatory and infectious matter from decaying fluids and inflammatory products, by inoculation, was induced solely through the vegetation of cocci, because the inoculation of inflammatory products and decaying fluids

* Experimental studies on the spreading of decaying organisms in the tissues, etc., Dr. Frisch, Erlangen, 1874.

free from cocci produced no action upon the cornea. With reference to practical surgery, these observations are quite sufficient to make it an imperative duty to secure the utmost cleanliness in the bandages and sick wards, as for practical purposes it is of little importance, whether the infectious material is inseparably adherent to these algae or is produced during their vegetation.

Many interesting problems remain to be solved in this direction, in the interests of science. Frisch has shown that coccos can vegetate a certain time (forming a star shaped figure), without causing inflammation, the cocci disappear, or fall out, the slight defect being replaced in a remarkably short time, without being accompanied by keratitis; from this I draw the following conclusions: among other things it is evident, that it is not the chemical or vital act itself, which causes the inflammation or phlogistic zymosis.

I arrived — basing my opinion upon purely morphological grounds—at the conclusion, that all coccobacteria vegetations which to us appear alike, do really belong to the same species of plants, that the difference of their action would depend on whether they had previously vegetated in nutritive fluids, which contained septic or phlogistic ferments or in innoxious or indifferent fluids. Different generations of coccobacteria vegetations would, according to this view, be at times entirely harmless, at other times excessively virulent, provided their germs be developed in a tissue. As an illustration, I will mention the following experiment: the eye of a rabbit will suppurate under all conditions, if a thread be drawn through the same, and permitted to remain. In the pus, coccos vegetations will always be established.

No one will maintain that it is not the thread, but the coccobacteria vegetations which, in this instance, is the causative element in the suppuration of this bulb. Inoculation, with this pus upon the healthy cornea of a rabbit, causes, by means of these coccos vegetations, intense keratitis and conjunctivitis; perhaps, also, panophthalmia, followed by phthisis bulbi. From this I conclude that every coccos vegetation found in decomposing pus assumes infectious properties. In other words, that coccos vegetations only then become infectious when they themselves have

been infected. It would be an important argument favorable to this view were it possible to disinfect coccos vegetations that have proven their infectious qualities without thereby disturbing their vegetative power, and then again to render them infectious by carrying to them certain kinds of matter. It is to be regretted that our methods of investigation have not yet advanced far enough; it can, therefore, not be denied for the present, that we are entitled to assume different species, according to the chemical action which takes place during the presence of vegetating coccobacteria in tissue fluids and secretions. It must also be admitted that on account of the small size of the object, we are not able, even with our best instruments, to notice any morphological differences between them.

Whether there do exist coccobacteria, which are pathogenic and remain pathogenic, or whether the different species of coccobacteria under certain circumstances are more or less alike, and then in turn become indifferent (perhaps simulating the mucorin spores, which at times become active ferments, while spores of the same vegetation may develop into ordinary mold, but these latter spores may in turn again become a ferment) this it is at present impossible to decide. We can only declare ourselves in favor of one or the other theory, on the ground of possible probabilities and analogy; or we must carry our observations into the fields of purely theoretical medicine or metaphysics, believing either the one or the other.

As certain as it appears to me from the investigations before me, that the taking of infectious materials in wounds from the outside, is mainly transmitted through these coccos vegetations, so important it appears to me to admit without farther comment, that those tissue changes which occur (according to the vulgar idea, decomposition with formation of odorous products) during acute inflammation and decay, are only brought about by the vegetative action of coccos, or through a ferment which they alone can transmit.

Even though we have, through the terms "odorless," "smelling," "foul smelling secretions," etc., provided for our perception, yet it must be evident that all these terms tell us nothing about the composition of these secretions, whether they be phlo-

gistic, pyogenous or other varieties of ferments or fermentation products. It has been sufficiently demonstrated that the small quantities of strongly odorous bodies as sulphuretted hydrogen, butyric acid, ammonia, etc., which are found in the secretions, though they certainly are not entirely harmless to the tissues and blood, neither alone nor in combination possess the terribly poisonous action which appears to be fermentative and which at times is developed by these secretions.

It may be looked upon as pretty well established that the phlogistic and putrid ferment and poison is an odorless body; hence, we draw the conclusion that because its development is often accompanied by the production of odorous bodies, that the first are there also where the latter appear, without being able to exclude their existence, where our sense of smell can detect nothing. Paradoxical as this may seem to the laity, it would be wholly unwarrantable, according to past experiences, to assert that it is possible to diagnosticate the presence of pathogenic or septogenic ferments by the sense of smell.

If it were possible to smell the poison of typhus, intermittent fevers and cholera, we should indeed give them a wide berth. The ferments in question are probably all odorless; whether the products of their action smell, is entirely a secondary question, according to a scientific view, and it depends on numerous circumstances sometimes entirely irrelevant, such as for instance the formation of the *fleur de vin*, which takes place entirely independent of the formation of alcohol and the process of fermentation.

When we designate the history of a wound as aseptic, we mean thereby that the secretions of the wound are odorless. Most wounds show no sign of inflammation during this course, and there are but few, if any, coccobacteria found in the secretions. The wounded have no fever, or at least it is very slight; and yet a wound may heal without inflammation or odorous secretions, but it may contain many coccobacteria, with a high degree of fever.

It follows, therefore, that coccobacteria vegetations, odorous secretions and fever do not always occur at the same time, viz., that one is not directly dependent upon the other.

Inflammatory and traumatic fevers arise, according to my hypothesis, from the resorption of degenerating or decaying products from the inflamed and injured tissues, and through their direct or indirect action upon the blood and nervous system; whether or not these decaying products smell, can prove nothing for or against my views. A long time ago I called attention to the fact, that if wounds be treated freely exposed, the secretions will mostly be odorless. According to the popular acceptation, this is the aseptic method par excellence. That the same results are obtained by Lister's method, that the same in truth may be utilized in a much greater degree than at present, I regard as an established fact. Notwithstanding this, there is an error somewhere in the physio-pathological establishment of Lister's method of treating wounds, which, however, cannot be looked upon as a reproof.

It has happened not only to the old alchemists, but to many of our most accurate modern observers, that during their investigations they have found something entirely different, perhaps indeed practically better than that which they theoretically sought for. The throwing together of botanical, chemical and clinical investigations in such a manner that an accidental discovery shall at once explain or refute everything in all directions, has brought about a state of unpleasant restlessness and bittter animosity in the discussion of the observations themselves, to establish and understand the connection of which must be our constant aim, without thereby laying aside our sensible scientific resignation to live for the present with questions which we can but try to solve, to work, to teach, and treat our wounded. As upon other domains of science we can only conquer step by step the domain of knowledge, and nobody is therefore free from error.

I have in these preliminary remarks defined my position with reference to the bacteria, septic, and Lister questions, which has not been altered by any of the late investigations, although much of that which I formerly observed and communicated, may be otherwise construed, and many of my hypotheses fall or must be modified. The following investigations furnish, probably, verifying rather than new facts; yet, they will serve to show my continued interest in the most important question of the day. There are certain parts of these researches which imperatively demand

clinical material, and to these I wish to add a few contributions although they raise more new issues than they can solve.

It has always appeared to me of paramount importance to know whether coccobacteria vegetations occur in completely closed abcesses. If this be the case, it appears to me proven (excluding the *generatio æquivoca*) that through the respiratory organs, or the alimentary canal, germs enter into the blood, that there they retain their vitality for a certain time at least, and only require to be brought under circumstances favoring their development, in order to vegetate. That this vegetation is feeble and not of long duration, is to be expected *a priori*, because plants as a rule only employ gas for their nourishment, which exists free or absorbed in fluids, they not being able to decompose organic and inorganic compounds such as water; and furthermore, plants as well as animals, perish in their excretion products.

It follows, therefore, that the coccobacteria vegetations cannot be expected to develop luxuriantly if their excretion products cannot be removed. It is usually assumed that they chiefly consume oxygen, but this is by no means certain; perhaps they chiefly require carbonic acid gas, if they are to flourish luxuriantly, certain it is that they demand, besides the introgenous compounds or carbonic hydrates, certain other component parts of the air.

We will, for convenience sake, divide the cases in which coccobacteria occur within closed abcesses, into primary and secondary or metastatic abcesses.

I. *Cases of coccobacteria vegetations in primary subcutaneous inflammatory abcesses.*—In my former work (Coccobacteria, p. 89) I cited two cases: Micro-coccos chains in a suppurating blood extravasation on the lower third of the thigh; and in an abcess which had formed about an anchylosed elbow joint in which forced action had been employed to render it movable.

I can add to these, two more very similar ones, with widely varying results.

Anna Schlosser, æt. 59. After she had scrubbed floors for several days, an acute præpatellar abscess formed on the left knee, and for this she was brought to the hospital, on the 10th day after the beginning of the inflammation. The abscess was

punctured, giving exit to odorless, slimy, viscid pus, which contained moderate quantities of plainly marked though latent micro-coccos chains.

Barbara Dolcher, æt. 23, a strong, well developed servant girl, had, on the 3rd of December, 1875, scrubbed the floor with much exertion; in the night of the 8th of December, she became ill, having a severe pain in the region of the left knee, was feverish, and unable to walk or attend to her work. In a very short time a præpatellar inflammation developed, spreading rapidly upwards and downwards from the knee. On the 14th of December she was brought to the clinic; she already made the impression of being intensely septically infected; the inflammation spread rapidly to the foot and hip, no trace of an injury being observable. On the 15th of December two incisions were made (at the patella and on the outer aspect of the thigh) giving exit to clotted blood mixed with ichorous but not very offensive pus, containing large quantities of latent micro-coccos chains. The phlegmonous dermatitis had, on certain portions of its sharply defined borders, a clearly marked redness, indicating its erysipelatous character; immediately above the heel a blister had formed, filled with bloody serum, which was full of latent strepto-coccos. The patient died on the 16th of December. At the autopsy the joints and bones of the left extremity were found to be healthy; otherwise no evidence of local disease was found. Death was evidently caused by septicæmia without any farther localization. From the autopsy report, with the exception of the lower extremities, nothing pathological could be discerned. About the result of the microscopical investigations of the liver and kidneys we shall report later.

All these cases have this in common viz: that the inflammation occurred after mechanical injury; that, therefore, a primary excitation of the inflammatory process through micro-coccos vegetations could not be thought of; in all the cases there were found only latent strepto- and micro-coccos in the pus, varying in quantity. In two cases the pus had an ichorous appearance, but was odorless only in the one case, and in two cases the pus was entirely odorless.

The different abscesses required from six to fourteen days for

their development. They were soon circumscribed, and in the last case, (Dolcher) only, we had to deal with an acutely progressive case, and only this one proved fatal. Ignoring the *generatio æquivoca*, it can only be assumed that coccos germs capable of vegetation were existing within the body, and that they developed in the site of the inflammation caused by an injury, probably because the pathological conditions especially favored their development at that point.

That the course of the disease was very mild in three of the cases mentioned, and exceptionally rapid in one of them, is somewhat difficult to understand.

The kind and degree of the injury, defective nursing, and improper treatment at the beginning of the disease, causes or conditions which usually serve to explain the difference in the result, cannot here be adduced. We are therefore left to the indefinable individual disposition to inflammations, if we do not wish to accept the modern but badly muddled theory of the different actions of the different varieties of micro-organisms, according to which man must carry within himself all kinds of micro-organisms in his tissues or blood, and when just those happen to vegetate that carry with them intensely inflammatory ferments, these would cause in the seat of irritation a serious progressive inflammation. This would compel us to assume again that it is not the vital vegetative act of the micro-organisms in question, that produces the ferment, but that there are only certain morphological not discernable organisms that do this, or to which the ferment in question is inseparably attached.

II. *Cases of coccobacteria vegetations in closed abscesses, in which there had existed a continuity with open wounds.* Under this heading belong several cases, which I have already communicated, of coccos in an abscess of the lymphatic glands of the neck after extirpation of the lip, etc. (Coccobacteria p. 89).

The last observation I made, was upon a boy æt. 14, June, 1874; also the following case belongs here. A man æt. 23, was operated upon for strangulated hernia. Three days after the operation the left half of the scrotum began to swell; the swelling increased rapidly, fluctuated distinctly, was completely isolated, could not be emptied even upon strong pressure until the

original wound was punctured with a fine trocar. Five days after the first operation, it gave exit to about 8 grams of a yellowish clear odorless serum, and a few drops of pus. This fluid contained a few free medium-sized coccos and strepto-coccos, and was particularly infectious.

In all these cases the secretions were odorless, and there were always found only latent micro- and strepto-coccos; these organisms had gained entrance through the external wound, and from there entered the lymphatic circulation, and through it into the cellular tissue and lymphatic glands, and they carried with themselves infectious materials, and so aided the progress of the inflammation. We may, however, assume that an irritative lifeless ferment called forth the inflammation, and that the micro-organisms were accidentally developed just as in the primary sites of inflammation. This would be equally plausible.

The first hypothesis assumes a certain duration of the vegetative powers of these organisms in the living flowing lymph, which is verified by analagous experiences under different circumstances, and can therefore no longer be denied.

III. *Cases of coccobacteria vegetations in closed metastatic abcesses observed on the diseased.* New observations.

Carl Pash, æt. 23, injured himself four weeks before his reception (June 3, 1874), with a splinter of glass in the middle finger of the right hand; there was enormous inflammation and gangrene of the finger; the phlegmon extended up to the shoulder, suppurating already. The pus contained latent micro- and strepto-coccos in large quantities. On the 12th of July there occurred a swelling on the right natis, on a spot of which the patient had complained several days before; on the 13th evident fluctuation, a large quantity of foul smelling pus was drawn off that contained great quantities of free coccos and strepto-coccos; eight days later the pus which was discharged in small quantities contained only traces of coccos.

Haar Jacob, æt. 52. A medium sized hard calculus; urine, acid; slight cystitis; performed lithotripsy: first successful sitting on January 22d, 1876, no reaction. Second sitting January 24th; on the day following sudden severe pain during an attempt at micturition, severe hæmaturia, that persisted for a long time in

spite of cold injections, and weakened the patient very much; (probably in consequenee of a plugging up by a sharp fragment) swelling of the corpora cavernosa, œdema of the prepuce, rapid development of an acute diphtheritic cystitis; on the following day the urine, ammoniacal, containing many coccos elements; following this, œdema of the scrotum, partial gangrene of the same. Ammonemia on the 3d of February; pain and then swelling of the right knee joint which was filled with pus, drawn off with the aspirator on the morning of the 8th of February. Exitus letalis on the evening of the same day. The extracted pus was thick yellowish and odorless, and contained great quantities of latent micro- and strepto-coccos.

Josef Kunz, æt. 6, received to be operated upon for eversion of the bladder and epispadias. Through repeated operations the bladder had been already closed, and the upper part of the penis and glans had become united. After the transposition of the prepuce upwards on the 23rd of June, the middle portion of the well-stitched prepuce became gangrenous; during the following days urinous diphtheria, alkaline bloody urine; on the 26th of June pain and swelling of the left knee joint. The joint was soon rendered tense by the accumulation of pus. On the 27th, puncture by means of the aspirator, gave exit to an odorless serous fluid, with a few flakes of pus, which contained great quantities of latent strepto-coccos coiled upon themselves. The fluid rapidly accumulated again; on the 5th of July, by means of puncture, thick, yellow, odorless pus, without micro-organisms was withdrawn, but the pus cells had a peculiar strongly marked granular appearance. Renewed accumulation; punctured July 10th; no trace of coccos; the pus cells degenerating, accumulated again; punctured with drainage July 24th. The pus was entirely free from coccos, and odorless; during the meantime the wound on the penis improved, becoming clean and granulating freely. The urinary diphtheria had passed away; urine, acid. During the time intervening between the 26th of June and the 5th of July, drops of blood drawn from the finger were repeatedly examined, but no clearly marked coccos, in fact not even a trace was found. The patient recovered; his joint was restored to normal mobility.

These investigations, it appears to me, offer much of interest. In all these four cases the metastatic disease could not well be be traced to blood clot, embolic from the primary inflammatory site containing coccos; therefore, it might seem questionable whether the vegetations in the metastatic abscesses were derived from those in the primary site of inflammation. We might assume that the coccos which are present in the pyæmically affected individual (as also in the healthy individual) readily vegetate, and that, therefore, there is no ætiological connection between the coccos in the wound and those in the metastatic abscess; that the coccos there as here is only an accidental addition to the disease itself. As important as they are to the poisoning of the secretions by acccidental or intentional inoculations, I incline to this view because of the cases already mentioned and others analogous.

If we desire to place the coccos in the primary abscess in direct (genetic) connection with the coccos in the metastatic abscess, then their transport was, even though it perhaps was begun by the tissue fluids, effected by means of the blood circulation. This would, as already indicated, imply a certain viability of the coccos in the circulating blood, but it would by no means prove that the eventual stopping of the coccos, for instance in the synovial membrane of the kneejoint, had caused the metastatic abscess. This might have originated from some other cause, simply offering an advantageous field for the development of the coccos as they were passing by.

Adopting either one of these hypotheses we come to another curious phenomenon. Were the coccos the carriers or the cause of the diphtheritic process in the two last mentioned cases (as has been assumed by many, and as I admit is possible from the experience obtained by its transmission to wounds after inoculations) then the passing cocci on their way to the knee joint lost their infectious diphtheritic character, because the pus in the knee joint was neither decomposing nor foul smelling; the process in the synovial membrane had a purely catarrhal blennorrhagic character; there was no diphtheritic process; there followed in the last case *restitutio ad integrum*. I am not able to solve this enigma. As a positive, and as it appears to me, an important result of the observations, I call attention to the different results

from the examination of the fluids extracted from the last case (Josef Kunz). In the, at first, serous secretions immense quantities of coccos were found, at the same time presenting no sign of decomposition; the more pus was formed the less coccos vegetations were found, at last disappearing altogether, the knee joint became normal again, the pus offered no peculiarity whatever to sight and smell.

That the coccos also disappeared in the ichorous pus, I have repeatedly called attention to. It appears to me that the cocci then decay when they have utilized the absorbed gases which the fluids contain; whether they have the power to decompose albuminoid bodies, still remains an hypothesis, notwithstanding assurances to the contrary, since the decomposition might occur without their presence.

The luxuriating coccos is therefore, when in the tissues of the body, confined to certain primary stages of the inflammatory process, they are destroyed by the rapid formation of pus. When, therefore, we find no coccos in ripened abscesses, we cannot say there never were any there. We can therefore not make any far reaching conclusions with regard to their action or their being the causative element in closed abscesses.

If these few experiments do not prove much, they at least agree completely with observations made during former experiments, that the secretions derived from the earlier period of an inflammation are phlogistically more irritating than those of later periods, and that the action of the coccos vegetations does not depend upon the mechanical influence, which they exert upon the tissues, nor upon the vital act of their vegetation, but upon this question, viz, whether or not they carry irritative materials with them into the tissues.

COMPOSITION OF PANCREATIC JUICE.—Defresne (*Rep. de Pharmacie*) has separated three different ferments from the pancreatic juice, each of which has different properties: *Amylopsine* converts starch into sugar; *Steapsine* splits up the fatty substances; *Myopsine* dissolves albumen.

Summary.

Collaborators:
DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY, DR. D. R. BROWER.

SURGERY.

CASE OF TETANUS CURED BY HYPODERMIC INJECTIONS OF MORPHIA AND ENEMAS OF HYDRATE OF CHLORAL.—(*Journ. de Méd.*, January, 1879.)

The patient entered Necker hospital, in the service of M. Broca, July 19, 1878. She had a voluminous osteo-sarcoma of the upper extremity of the right humerus, which began to show itself four months since. July 24, disarticulation of the shoulder, justified by the state of the bone. Cotton dressing. The dressing not being well supported, Dr. Monod, who took M. Broca's place, August 1, substituted the antiseptic dressing of Lister; wound in perfectly good condition. The first symptoms of tetanus appeared August 12. Patient complained of sore throat, but nothing peculiar was seen on examining the pharynx and tonsils. Jaws slightly closed; some pain on pressing over tonsils, but especially excited when patient swallows. While dressing the wound in the evening patient had a chill. From this time the following treatment was instituted in anticipation of tetanus, of which these appeared to be the first symptoms. An enema containing 4 gms. of hydrate of chloral was given at night, and hypodermic injections of morphine during the day. During the treatment which lasted a month, there was persistence of the contraction of the masseter and pharyngeal muscles of variable degree; two or three times the muscles of the back of the neck

presented slight contracture, and once those of the back became sensible. Morphine was given according to the indications in these changes. An exaggerated sensibility of the wound, and even proud flesh, was seen during the course of these accidents. The digestive functions were not disturbed, the patient being supported with liquid or finely divided food. The patient was kept in a nearly continuous sleep for nearly a month, the morphine being given not regularly, but as indicated. The temperature never was above 38°6. The cure was complete. Two months after there was a recurrence of the tumor.

DERMATOLOGY.

CHRYSOPHANIC ACID IN PSORIASIS. Neumann.—(*L' Union Médicale*, Feb 8, 1879.)

Chrysophanic acid	6
Prepared lard	30

Mix.

The ointment is spread upon lint, or if the skin is infiltrated, on strips of cloth, which are then applied to the diseased patches. After three or four dressings the scales disappear, and the subjacent skin is perfectly white, but in a few days resumes its natural aspect. When the psoriasis is accompanied by excessive infiltration, ten or twelve applications are necessary. For herpes tonsurans and pityriasis versicolor, three inunctions are generally sufficient; but it is for psoriasis that chrysophanic acid has proved the most efficacious. Unfortunately, the cure is not radical, and the eruption may reappear later. Chrysophanic acid should not be applied to the face except with reserve, on account of the change of color which it may cause in the skin and hair. It has, besides the inconvenience of staining the linen. Ointment of much less strength may be sufficiently active to fulfill all the indications.

THERAPEUTICS.

A NEW DISINFECTANT.—(*Lyon Médical.*)

Under this title Dr. John Day, of Australia, recommends (*Alger Médical*) for use in general hospitals and for destroying

contagion germs, a mixture of one part of rectified essence of turpentine and seven parts of benzine, with five drops of essence of verbena to the ounce of the mixture. Its disinfectant properties are due to its capability of absorbing oxygen and converting it into ozone. Furniture, clothing, books, etc., can be disinfected with it without injury, and whether it be applied to a porous or non-absorbing surface, its action persists indefinitely. It can be applied with a sponge or brush, or an object be immersed in it. One can convince himself of its vigor of action at any time by dropping some solution of iodide of potassium on the substances thus treated; decomposition of the salt occurs in the presence of ozone, and the characteristics of free iodine are easily recognized.

OBSTINATE CASE OF HICCOUGH CURED BY THE PASSAGE OF AN ŒSOPHAGEAL SOUND. By Dr. E. Barré. (*L'Union Médicale*, March 17, 1879.)

V. B., employed in a bank. Age 45. Excitable temperament. Lost a little girl, January, 1876, from tubercular meningitis. Emotion brought on a continual and insupportable hiccough. Consulted a physician, and by the use of ether and bromide of potassium obtained relief, only to be again subject to the same annoyance. The ether, bromides and morphia no longer gave him relief. A second physician was consulted, with only a slight relief.

Wearied, he resorted to a herbalist; obtained no result. Then went to *l'Hôpital Lariboisière*. Followed directions faithfully, without relief.

His general health now became seriously affected by the continual disturbance.

On November 6, 1878, he went to consult Dr. Barré. He administered medicine, the chief ingredient of which was chloroform. This failed completely.

A general course of tonics was tried, with no success. On the 12th of January, the patient repeated his visit to Dr. B., and manifested greater discouragement than ever. The doctor confesses that he himself was not less discouraged. He tried compression, without effect. Just then his eyes alighted on an

œsophageal sound which lay upon his desk. Without much thought he passed the sound into the œsophagus; he does not say how far. Immediately his patient fainted. The sound was quickly withdrawn, and efforts directed to his revival. Dr. B. reproached himself for having resorted so thoughtlessly to such a measure, but was encouraged on the appearance of his patient the next day, with the assurance that he had only experienced three slight attacks since the former operation. The physician introduced the sound again, this time without any inconvenience, and at the time of writing, thirty-seven days after, no return of the hiccough had manifested itself.

A HIGHLY VASCULAR NÆVUS TREATED BY INTERSTITIAL INJECTION OF A 15 PER CENT. SOLUTION OF CANTHARIDINE IN CHLOROFORM.

On Sept. 21st, 1878, a child was brought to the Hôpital Saint Antoine, bearing in the inguinal region a prominent nævus of bright red color, the size of a large hazel nut, from which, from time to time, slight hæmorrhages took place, which led its mother to seek a cure of the little tumor. On the 22d there was injected half a gram of the solution, containing seven and a half miligrams of cantharidine; at the moment the child cried, but in half an hour was quiet. Two hours after it complained of smarting and pain in the tumor; three hours after a congestive zone around the nævus; twelve hours after a vesicle, and in twenty-four hours an eschar, which enlarged the following days; fourth day eschar very distinct, and several small vesicles in the healthy skin around the nævus. About the twelfth day eschar completely formed and, on the twentieth, commencement of line of separation on a level with healthy skin, for the eschar was not exactly limited to the tumor. One month after, eschar on the point of falling, and in two months there remained a slight wound, with tendency to heal; two and a half months after, the cicatrization was complete, with tendency to diminish; finally, three months after, there remained but a superficial scar, without any appearance of the vascular tumor.

CONCERNING PLUMBIC NITRATE.—(*Med. & Surg. Reporter.*)

Dr. Marsh, of Louisiana, some years ago called attention to the great value of plumbic nitrate in many skin affections and erosions. Recently, an Italian, Dr. Galletti, has added his testimony as to its merits. He states that he has cured three cases of epithelioma by dusting the powder over the affected part; recovery taking place after four or five applications. Two obstinate ulcers of the foot which had proved rebellious to other treatment quickly recovered after similar applications. Dr. Vanzetti has recently recommended the use of this salt, also, in onychia maligna.

CHLORAL AS A REVULSIVE.—(*Bulletin de Therap.*)

Dr. Peyraud states that chloral made into a mass with tragacanth, spread on paper or cloth, and applied to the skin, will produce a blister without pain. Applied as a powder on cotton it causes burning pain. By the former method a portion is absorbed and sleep produced. Its action is not quite as certain as that of cantharides, but as a mild revulsive and agreeable vesicant its action is very agreeable.

THE Annual Commencement of the Medical Department of the State University of Iowa, took place at Iowa City, on the evening of March 5th, 1879, at which fifteen candidates received the degree of Doctor of Medicine. The degrees were conferred by his excellency Gov. John H. Gear, President of the Board of Regents. The faculty address was delivered by the President of the University, J. L. Pickard. The class valedictory was delivered by Fred. H. Little, of Muscatine. This occasion closed the third year of operation in the department, of the "three years graduated course" of study, and a thorough revision of the plan of this course, with the addition of a preliminary examination of applicants for matriculation, are the steps in advance announced for next session.

Items.

"CALIFORNIA'S LAST, BEST GIFTS."—It is well known to most of our readers that one Dr. Bundy, of California, has been foisting upon the market, with the aid of a certain journal devoted to bringing before the public the products of a manufacturing firm, numerous *new preparations* of non-officinal drugs indigenous to his own State, claiming for them remarkable properties. Some of these were introduced under their own botanical names; for others names were drawn from the Spanish vernacular or were coined for them in the same language. These have been widely advertised and favorably commented upon by various medical and pharmaceutical journals.

Among other journals, *The Philadelphia Druggist and Chemist*, having perpetrated a lot of buncome concerning them, Dr. Gibbons has thought best to correct its statements, and give a brief sketch of some of the plants, in a leading article in the *Pacific Medical and Surgical Journal* (October, 1878). We draw upon his paper for much of the following.

Yerba Santa ("Holy Herb"). Eriodyction glutinosum, a shrub growing along the coast range and its foot-hills; used extensively in domestic medicine by the Spanish population; considered of some value in pulmonary and throat affections. Has been used more or less by regular practitioners for years, although regarded as still on trial. *Not* introduced by Dr. Bundy.

Berberis Aquifolium.—One of four species of berberis or barberry found in California. In the secondary list of the U.S.P. The genus is very old, and its active principle *berberina* well known. B. pinnata is probably what Bundy uses.

Cascara Sagrada (Sp. for "Sacred Bark").—No such plant known to botanists. Dr. Gibbons received a specimen from a Cincinnati druggist which he was convinced was the article sold

as cascara sagrada, which proved to be a species of rhamnus, or buckthorn, of which four species are found in California. The properties of rhamnus are well known, and here we have an explanation of the wonderful virtues of cascara sagrada in constipation and allied difficulties. Bundy claims to be the discoverer of this remedy, known and used three hundred years before he was born.

Yerba Reuma. Bryzopyrum Spicatum (Hooker).—A grass covering the beaches and marshes along the coast. Has slightly astringent properties.

Grindelia (Compositæ).—G. Robusta is a known species. G. Hirsutula has been used in rhus poisoning. G. Squarrosa was described in Torrey & Gray's botany, but in the new California flora of Dr. Gray was omitted because it was not a well-marked species. G. Robusta is probably of some value, but Bundy's cautions as to the necessity of noting the difference between the robusta and squarrosa are simply bosh.

As Dr. Gibbons says, "it is not agreeable to deal in personalities," but the truth should be known. The writer was informed months ago, by the representative of a well-known Eastern house, that this I. H. Bundy was an eclectic, not to say charlatan, and the article from which we quote, written by one who knows still more of him, only corroborates the statement. That such a man can boast of his pseudo "discoveries," of his tremendous labors connected therewith, and can dignify them with any such phrase as stands at the head of this article, is bad enough, but that his worthless writings should be given such extensive notice, and his statements be made to fall, *ex cathedra*, upon our ears, is intolerable, and we are glad to do our share of publishing the truth.

APOLLINARIS WATER.—Some of the New York papers, who, following the example of many of their most eminent European *confreres*, endorsed the dietetic value, purity and natural origin of the Apollinaris water, must have felt a little shaken in their judgment, or, at least, annoyed at the implied slur upon their accuracy by the publication and extensive advertisement

of trade attacks upon the water, which alleged that the Apollinaris water sold here in bottles is not the water of the spring, and is not charged with its natural gas. The recent publication of certificates by Oscar Liebreich, Wauklyn, Herman Weber and others, re-affirming the absolute accuracy of the claims of the Appollinaris of commerce to its title of a natural mineral water, has had a re-assuring effect; but we think that the certificates now issued and just placed in our hands will, nevertheless be valuable as setting the matter entirely at rest. It would not be possible to mention four names of greater weight on such a subject, or more sure to receive entire assent to any statements which they make, than those of Prof. Hoffman, of Berlin; the illustrious Kekule; Frankland, the leading water analyst of Great Britian; Odling, the British chemical juror at our centennial exhibition and the professor of chemistry in the University of Oxford. All four have been induced to repair to the springs to examine every detail personally, to compare the water issuing from the spring with the water of commerce, and to investigate the process of bottling. Each for himself, and in his own words, elaborately reports the result of his personal investigation, and each arrives at the same conclusion, namely, that the Apollinaris natural mineral water of commerce is the natural mineral water of the Apollinaris spring, bottled at the spring, charged only with its own gas, and with the same proportion of the gas as exists in the water at the depth at which it is drawn from the spring. The agents of the U. S. Treasury Department in Europe had been instructed from Washington to institute for themselves an independent inquiry, so as to ascertain and place the facts beyond doubt. They have done so, and have officially reported likewise to the government, that there is no foundation whatever for the charges made, and that the Apollinaris water sold here is, beyond doubt, the water of the spring, bottled on the spot and charged with its own gas. Thus the New York doctors may rest satisfied that they are justified in their generation, and that *this* "great European novelty," at all events, is what it represents itself to be.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, May 5 and 19.
West Chicago Medical Society—Mondays, May 12 and 26.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.
Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Prof. Hyde; 3 p. m., Medical, by Dr. Bridge.
Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.
Rush Medical College—3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.
Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman.
Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.
Woman's Medical College—11 a. m., Ophthalmological, by Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.

THE

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[In these pages dimension and weight are expressed in terms of the Metric System, and temperature in degrees of the Centigrade Scale.]

Original Communications.

ARTICLE I.

ON THE CONDUCT OF THE THIRD STAGE OF LABOR. By DE LASKIE MILLER, M.D., Professor of Obstetrics and the Diseases of Children, Rush Medical College, Chicago. Read before the Chicago Gynæcological Society, April 25, 1879.

GENTLEMEN: — In venturing to occupy the time of the Society with some thoughts upon the management of the third stage of labor, I must ask the members present to descend from the elevated plane on which occult and abstruse questions are met, and where also rare and new experiences are encountered, to the common level of ordinary practice and observation. If the daily experience of the accoucheur is barren of startling incidents, it is nevertheless, to the thoughtful physician, clothed with peculiar interest: 1st, on account of the great number of cases, in ever varying forms, which constantly recur to claim his attention; and 2d, from the fact that apparently slight errors are so liable to lead to disastrous results.

Do I affirm too much in the intimation, that in a department

where the recuperative forces of nature seem almost unlimited. that familiarity is liable to lead to inattention in details, which may subvert these conservative forces of nature? Let any physician of considerable experience take a retrospect of his observation — I will not say here of *his own* experience, and I feel confident he will not fail to recall instances, and possibly many which will justify the assumption.

I doubt whether a greater diversity of practice, pursued by different physicians, will anywhere else be found, than prevails in the management of the third stage of labor — in the kind of assistance offered, in the time at which it is proferred, and in the manner of its execution. I have known physicians who, especially in sparsely settled sections of the country, seldom, if ever, make the second visit to their patients after delivery, and many times not even one visit to learn by personal examination the effects and results of the labor. I have seen a physician of many years' experience, after the delivery of his patient by the forceps, introduce his hand into the uterus and forcibly deliver the placenta within ten minutes, and bid his patient good-day in a few minutes after, without making any examination to ascertain the quality of the pulse or the condition of the uterus. Instances like these might be enumerated, till gentlemen would become weary of the detail.

Believing, as I do, that the third is the most important stage of labor, I have been frequently and strongly impressed with the suspicion — which suspicion has become a conviction — that the importance of this stage of labor is too generally underestimated.

Though the accoucheur should consult his watch and govern himself by the stereotyped admonition to remain with his patient at least an hour after the delivery of the placenta, he does not thereby discharge his whole duty in all cases. The third stage of labor is not completed when the placenta is delivered, nor until certain important conditions have been secured, which ensure the safety of the patient, though it require twelve hours to accomplish these.

As a guide to our duties, we may draw useful practical lessons from a study of the natural phenomena in cases requiring no assistance. First, however, I may be allowed to refer to the

normal connection between the uterus and placenta. This attachment is not effected by muscular, fibrous or cellular tissue, and does not extend deeper than the lining membrane of the uterus. The mucous membrane of the uterus lies in contact with the muscular tissue. In this, it differs from the arrangement found elsewhere, viz., that the mucous membrane is attached to organs through the intervention of a layer of sub-mucous cellular tissue. The endo-metrium receives innumerable vessels (some of which have but a single coat), which are distributed to and surround the utricular glands. This mucous membrane contributes to the development of the placenta. In this development the vessels become greatly enlarged, but their walls are not proportionally strengthened, so that the placenta is only held firmly *in situ*, while the normal conditions of gestation continue. These essential conditions are: 1st, the size of the placenta must increase *pari passu* with the segment of the uterus to which it is attached; and 2d, the counter pressure afforded by the liquor amnii must furnish the requisite amount of support to the placenta from within. Now, what is nature's mode of completing the third stage of labor? After the expulsion of the child, the uterus remains quiescent for a time, perhaps ten or fifteen minutes, then a slight dilatation of the organ is appreciable, which is immediately followed by contraction, and these alternate contractions continue till the placenta is separated and expelled from the uterus, requiring from half an hour to an hour; its extrusion from the vagina by natural forces may follow immediately or may be delayed.

These three stages in the expulsion of the placenta, viz.: 1st, the detachment; 2d, the expulsion from the uterus; and 3d, the expulsion from the vagina, are sufficiently distinct to be readily appreciated.

It is not only interesting but important to comprehend the conservative phenomena which take place in the uterus during this process of placental expulsion. Should the placenta be separated to a greater or less extent, as the child is expelled, which is usual, the contracted state of the uterus prevents hæmorrhage, and the quiescent condition permits coagula to form and seal the orifices of the sinuses, and this is repeated till the

entire separation is effected. By these means the patient is protected from hæmorrage after labor.

The first deduction from this study is that *time* is an important factor in the third stage of labor—time between uterine contractions, when the organ remains quiescent to permit the small coagula to form; 2d, the impropriety of agitating the uterus by immediate compression and kneading to hasten the delivery of the placenta. In many cases, nature may be aided in completing this stage of labor, but the assistance offered should not subvert the phenomena above described. When the placenta has been expelled from the uterus, nothing is to be gained by delay; then it may be lifted out of the vagina; or again, after detachment, should it lodge centrally over the os uteri, one border may be brought down by hooking the finger over it, when it will be delivered with facility.

In difficult labors the uterus may not contract upon the placenta as promptly or as efficiently as in the case described. Then more time should be allowed. The uterine contractions should accomplish the first stage of placental delivery, viz., its detachment. Hasty forcible detachment would manifestly thwart the natural process. When a physician frequently encounters hæmorrhage in this stage of labor, the inference cannot be avoided that the error of too great haste in extracting the placenta may explain the complication.

This brings me to the enumeration of the consequences of too sudden and forcible delivery of the placenta: 1st, liability to post partum hæmorrhage, which may immediately endanger the life of the patient, or if less severe, may lead to a slow recovery; but hæmorrhage is not the only or the greatest evil to be apprehended, for this can generally be controlled; 2d, blood will be retained in the imperfectly contracted uterus and sinuses which remain patulous, then decomposition of the retained blood, a frequent cause of after-pains, will take place, and septicæmia may follow.

Is this not the possible explanation of the cause of "milk fever," which some think is necessarily attendant upon the first active function of the mammary gland? To prove that febrile movement in the system, is not necessarily due to the secretion of

milk, requires only a little observation in cases managed in accordance with the principles already stated. 3d, subinvolution of the uterus, with all its secondary consequences, is another and more permanent complication which is liable to ensue.

To obviate or diminish these possible complications, various drugs and agents have been employed, all intended to fulfill one indication, viz., to secure prompt and permanent contraction of the uterus. Among these, ergot holds the first place, and is par excellence the remedy entitled to confidence, on account of its peculiar effect upon the uterus. I incline to the opinion that the only legitimate use of ergot in obstetric practice, is in post-delivery. It is many years since I have exhibited ergot to hasten the expulsion of the child. The contraction of the uterus, under the influence of this powerful agent, is so entirely different from the normal parturient action that we may well feel surprised when injury to the child or mother does not follow its use in the second stage of labor.

The profession has come to realize these dangers to some extent, and hence the caution given, not to administer ergot too early in labor or when there are obstructions to delivery. The tonic contraction of the uterus, produced by ergot, must compress the placenta continuously, and thus interfere with its function to a corresponding degree. At the same time the continuous pressure of the presenting part of the child upon the soft tissues of the mother cannot be other than injurious. I would always resort to other equally efficient and more harmless means to expedite the second stage of labor.

We hear less of hour-glass contraction and retention of the placenta, since ergot has been exhibited with caution. This leads to a brief consideration of the management in cases of retained placenta. The causes of this complication are various, but may be classified as follows: 1st, inertia of the uterus. 2d, irregular contractions of the uterus, and, 3d, abnormal adhesion of the placenta. If inertia be the cause of retained placenta, it frequently follows, and is caused by the exhaustion of muscular power, in "laborious labor," or it may be caused by the sudden artificial delivery of the child, instead of allowing the extremities

of the child to remain and stimulate the uterus to complete contraction as the extremities are expelled.

In such a case, if there be no hæmorrhage, and there will not be, unless detachment to a greater or less extent has taken place, time and restoratives are essential to the safe conclusion of the labor.

If hæmorrhage be present, indicating detachment to some extent, the complete separation of the placenta by the hand, and not by traction upon the cord, would be judicious, and at the same time and by the same means, the mechanical irritation of the uterus will ensure its contraction, which may then be kept up by ergot.

Irregular contraction of the uterus must usually be overcome by mechanical means. Should there, however, be no pressing necessity for prompt delivery, as there would be if hæmorrhage complicated the case, no haste in interfering or violence in operating would be justified. The time for operating will depend much upon the condition of the patient, and will be decided by the judgment of the practitioner in any given case. It will seldom occur that anything is to be gained by waiting longer than an hour and a half. Only one additional suggestion will be offered upon this point, and that is, the admonition not to act too rapidly. Acting continuously upon the uterus, by moderately extending force, for a sufficient length of time, will accomplish more and with safety to the tissues of the uterus, than greater violence applied suddenly. Great difficulty, and even temporary defeat, may be encountered by attempting to overcome the contraction and extract the placenta too suddenly.

Abnormal adhesion of the placenta occasionally causes its retention, not as frequently however as is supposed by some. Every placenta is adherent till the uterus contracts upon it. In the normal detachment the uterus is the active agent, while the placenta is passive. Abnormal adhesion of the placenta would appear to be a reasonable explanation of hour-glass contraction of the uterus. Encystment of the placenta may result from adhesion. In this condition the placenta may be retained in utero an indefinite length of time, without causing any marked symptoms, or becoming decomposed. I remember to have delivered a pla-

centa three days after the birth of the child. It was globular in form from the equable pressure of the uterus, which completely surrounded it, and in its structure showed not the least appearance of decomposition. Query, would it be possible in such a case for the placenta to disappear without expulsion? It has been affirmed that the placenta has been removed by absorption. In missed labor the soft tissues may be removed thus; a more wonderful phenomenon than would be the absorption of the placenta. The practical suggestion, in adherent placenta and hour-glass contraction, is to dilate the contracted portion of the uterus, and separate the placenta by the hand and deliver, being careful to secure general contraction of the uterus as it is relieved of the afterbirth. This operation shonld be undertaken as soon as we determine the complication. Nothing is gained by delay. I would never leave the patient till the case was completed.

RÉSUMÉ.

1st. Contractions of the uterus after the birth of the child are essential to complete the detachment and expulsion of the placenta first, and second to compress the sinuses and thus to prevent hæmorrhage.

2d. Periods of rest during this process are important, to permit the closing of the disrupted sinuses by sealing with coagula.

3d. The early agitation of the uterus by kneading and compression would defeat the conservative forces of nature in this stage of natural labor.

4th. Withhold ergot till the placenta is detached.

5th. Deliver the placenta by bringing it down edgewise with the hand, and not by traction upon the cord.

6th. Inertia of the uterus without hæmorrhage requires time and restoratives.

7th. Inertia of the uterus with hæmorrhage, introduce the hand to deliver the placenta, and at the same time secure contraction.

8th. Irregular contraction is best overcome by moderate force, continuously applied.

9th. Abnormal adhesion requires artificial interference so soon as the diagnosis is made.

ARTICLE II.

A LESSON FROM OVARIOTOMIES.

By J. T. Everett, A.M., M.D., Sterling, Ill.

The knowledge acquired by failures is food less palatable than nutritious. It is more unpleasant to publish our unsuccessful than our successful operations. Where, however, a lesson is to be learned, they are just as much the property of the profession as our most brilliant achievements.

Case I, was performed November 17, 1872, and reported in the *Chicago Medical Examiner* for April, 1873. Patient, 41 years of age, complaining of pain in the back, increased nervousness and epigastric neuralgia; lump in left ovarian region the size of an adult head. Bimanual palpation gave distinct fluctuation and wave motion, and the hypodermic needle withdrew clear, straw-colored serum, containing albumen and ovarian cells.

On the 16th, an active cathartic was given, and after the bowels had been thoroughly evacuated, a suppository of 0.6 gms. pulv. opii was inserted. The bladder was then entirely emptied by means of the catheter, and with the assistance of Drs. Hunt and Newton, I proceeded to operate in the following manner:

The patient having been fully anæsthetized, an incision eight centimeters in length was made along the linea alba, midway between the symphysis and the umbilicus. On reaching the peritoneum, this membrane was raised and nicked, and divided upon the grooved director. The sac was next examined and found to be a monocyst, and non-adherent. The sac was next evacuated, fortunately without the escape of a drop of the cystic contents into the peritoneal cavity. The tumor was then lifted out of its bed, the pedicle transfixed by a needle carrying a double carbolized animal ligature, which was tied each way and cut short. The pedicle was then pared off and dropped into the abdominal cavity. The previous superficial hæmorrhage from the lesser branches of the epigastric artery, with their accompanying veins, having been entirely controlled at the time of their division, there

was no perceptible exudation of any kind into the peritoneal cavity. This was next carefully sponged out with warm carbolated water, to make assurance doubly sure, and to guard against any possible septic contamination. The abdominal walls were next brought together and secured with quilled sutures of silver wire, a film of carbolated collodium placed over the incision, this in turn covered with a layer of cotton saturated with carbolized oil, and over all a wide flannel bandage. The patient was kept under the influence of morphia administered hypodermically for several days, with a free use of tr. ferri chloridi, and quinia.

On the 23d, the bowels were evacuated. On the 24th, a slight puffiness appeared at the lower end of the incision, and on removing the dressing about 128 CC. of clear serum escaped. The orifice was again closed, and healed rapidly.

Recovery fully established at the end of the fourth week. The sac and contents weighed nearly 5 kilograms.

Case II. Was called September 3, 1872, to see Mrs. A. M., aged 32 years, multipara, anæmic, with marked specific symptoms. Complained of severe epigastric pains, neuralgia and bearing down in back and bowels. Examination revealed an eroded os, from which oozed a thick ropy secretion. Distended abdomen, of the size of pregnancy at the 7th month. Circumference at hips, 91 Cm.; circumference at umbilicus, 108 Cm.; circumference at ensiform cartilage, 81 Cm. Bimanual palpation gave distinct fluctuation and wave motion.

I inserted three insulated silver needles 14 Cm. into the most prominent portion of the cyst and attached the negative pole of a 20-cell zinc carbon battery, the positive pole being placed over the sacro-lumbar junction. This current was allowed to flow through the tumor for 5 minutes.

September 8.—Patient has felt no bad results from the treatment, but owing perhaps to the constitutional and local treatment is feeling stronger and has less pain. On measurement, the umbilical diameter was found to have decreased to 81 Cm. Same treatment.

September 15.—Found patient still better; umbilical diameter 71 Cm. Patient gradually improved until entire recovery took place. Was lost sight of for three years, when she was

again examined, and no trace of cyst was discoverable except an enlarged ovary, with some bloating and pelvic adhesions and tenderness.

Case III. Saw Mrs F. H. May 10, 1873; multipara, aged 26; general health good, but suffering much mental trouble on account of a growth in left ovarian region, the size of the adult head. Examination revealed womb nearly normal; bi-manual palpation gave clear fluctuation and wave motion.

To confirm diagnosis of ovarian cyst, the hypodermic needle was thrust into the most prominent part of the tumor and withdrawn with clear fluid about the consistence of glycerine, which showed, under the microscope, well-defined ovarian corpuscles, and gave the reaction of albumen, and traces of paralbumen.

At first sitting, a needle was introduced 10 Cm. into the sac, and a 20-cell current passed for five minutes, as in the preceding case. 16th.—Same treated repeated. 22d. Same treatment. 29th. Tumor less in size; repeated treatment.

June 5th and 12th.—Treatments repeated; tumor reduced one-half in size, and more dense to the touch; catamenia appeared on the 15th, more profuse than usual. 20th.— Repeated treatment; tumor still decreasing slowly. Eight more treatments were given at weekly intervals before the growth entirely disappeared. Patient has since borne a child, and is now enjoying good health.

The query arises, why should this small tumor require fifteen sittings for its destruction, while one nearly twice the size disappeared rapidly after only three treatments? Was the previous case one of monocystic tumor, and were the whole contents changed in character by the electric current, and thus more rapidly absorbed? And in the present case, was each separate cyst of a polycystic tumor decomposed and absorbed before the next could be reached and cured?

Case IV. (*a*) December 8th, 1873, saw Mrs. S. W. Multipara, formerly in robust health; but now presenting the peculiar facial characteristics of ovarian trouble. Had noticed the growth for four years, with constantly increasing symptoms of pain in the back and loins, with epigastric neuralgia, great nervousness and exhaustion. Vaginal examination revealed soft, flabby os; uterus pushed over to the right side and low down. Tumor

extending from true pelvis to ensiform cartilage. Umbilical circumference, 124 Cm. Inserted three platinum needles 18 Cm. into the cyst and passed a 30 cell current for 20 minutes, in the same manner as in the two previous cases. The patient was now allowed an hour's rest, and as I had to return to the city, the current was again used in like manner for 30 minutes. Patient was left, after ordering a supporting treatment, and rapidly improved. At the end of the third week the umbilical diameter reached 76 Cm. Tumor rapidly disappeared, and at the end of the first year she considered herself perfectly well.

In the spring of 1878, five years from the time of the supposed cure, I reported the last three cases to Dr. Paul F. Mundé, who incorporated them in his list of cases successfully treated by electrolysis, in the paper which he prepared on "Electrolysis of Ovarian Tumors," for Vol. II of the Transactions of the American Gynæcological Society.

The following case shows that the cure was not permanent:

Case IV (*b*).—Was called Sept. 30th, 1878, to see Mrs. S. W., whom I had cured (?) in 1873 by electrolysis. Found that the tumor had returned with all the concomitant symptoms of true ovarian tumor, and was of the size of pregnancy at term. Hypodermic needle withdrew a clear, viscid, straw-colored fluid. As the patient lived 20 miles from the city, and as circumstances precluded my making another visit — although armed only with an ordinary pocket case of instruments — I concluded to operate. With the assistance of Drs. Freer, Smith and Fergus, I operated in the usual manner.

The bowels having been thoroughly evacuated by a copious injection (there being no time for a cathartic to act), a hypodermic injection of .02 Gms. of morphia was given, and the patient thoroughly anæsthetized by Dr. Freer.

The urine remaining in the bladder was drawn off and an incision 10 Cm. in length was made along the linea alba, midway between the symphysis pubis and the umbilicus. Upon reaching the peritoneum, this membrane was divided upon the director, after having controlled the superficial hæmorrhage from the twigs of the epigastric vessels.

The sac was now seized with two pairs of rat-toothed forceps,

one on each side, and held well up against the cut margin of the peritoneum, and then divided with the bistoury. Fortunately but very little of the cyst contents entered the abdominal cavity. After the cyst was nearly emptied, it was drawn out, the pedicle transfixed with a needle carrying a double silver wire ligature, which was cut and tied each way. The pedicle was cut short and dropped back; the abdominal cavity carefully sponged out with warm carbolated water, and the walls approximated with silver wire interrupted sutures. Over all a coating of carbolized oil, on cotton, and this retained in place by a flannel bandage. The sac and contents weighed 13.6 kilograms.

The patient was placed in bed, and left in the care of Dr. Freer, who has just furnished me with the subsequent history of the case.

Patient kept well under the influence of morphia for the first two or three days, with free use of iron and quinine. On the sixth day, bowels moved spontaneously; sutures removed on the 10th, leaving good, strong cicatrix. Patient did not have a single untoward symptom through the whole time, but made a rapid recovery, and is now apparently as well as ever, with slight tenderness over the line of the incision. Menstruation appeared at the second month, and has recurred regularly ever since.

Case V. — Was called, Dec. 11th, 1878, to see Mrs. A. C., aged 52, multipara, naturally very robust. I learned that patient had been troubled somewhat with pelvic pains for several years.

About three years ago she first noticed abdominal enlargement, which at first was ascribed to natural causes; but after reaching full period and no change taking place except a constant increase in size, some uneasiness was felt, but still no advice was sought until about two months previous to my visit, when symptoms of a low type of fever setting in, a physician was summoned, who prescribed symptomatically, and treated the case very ably, but still failed to arrive at a full diagnosis of the case. The patient grew gradually worse, notwithstanding the well directed efforts of the physician to build up the patient, until, at my first visit, the distension of the abdomen was such as to interfere materially with respiration and nutrition. The patient had not been able to assume the recumbent position for the last three days. Had

not slept any for 48 hours. Exhaustion and carbonization of the blood had greatly impaired the intellection. In fact the appearances were, that the patient could not last many hours without immediate relief. On making out the diagnosis, which was not difficult, I informed the family of the same, and advised aspiration as a palliative measure. This was at once consented to, and I immediately drew off 6.13 kilograms of clear, transparent, ropy fluid. This sac being emptied, and the needle withdrawn, the patient lay back on the bed, gave a sigh of relief, and said, "Now I feel easy, and can sleep." She at once dropped into a quiet sleep, and rested nicely until morning. The next morning I aspirated another cyst, but the contents were too viscid to pass through the needle; therefore I withdrew it, and in its place inserted a trochar having the capacity of .03 Cm.; through this escaped only a small quantity, when it became clogged by a mass of floating fibrin, and the attempt was given up and the trochar withdrawn.

I now left the patient, with directions for tonic and stimulating treatment.

Dec. 17th I saw the patient again, and notwithstanding the gravity of the case, found her somewhat improved. Again aspirated with large needle and withdrew 6.59 kilograms of thick, ropy contents, of the consistence and appearance of soft soap. The friends requested an early operation, they having been previously made acquainted with the probabilities in the case.

Dec. 21st, I found patient much the same, and evacuated two more sacs of 2 kilograms each. I informed the family that, in the present condition of the patient, I could not advise an operation, but as that held out the only chance of saving or prolonging the patient's life, I would operate if they requested. This being their wish, I visited the patient Dec. 24th, finding her in the same condition as on the previous occasion. With the assistance of Drs. Gillespie and Mosher, I proceeded to operate in the following manner:—

The bowels and bladder having been previously evacuated, a suppository of opium was introduced. The patient was then anæsthetized with chloroform by Dr. Gillespie. The spray apparatus was consigned to the care of Dr. Mosher, who also

rendered such operative assistance as the case required. On opening the abdominal cavity, the adhesions between the peritoneum and the sac were so dense and extensive that it required the utmost care to distinguish the one from the other.

The adhesions were at length carefully broken up with the hand, and, on attempting to thrust the "Spencer Wells trochar" into the most prominent sac, its friable walls ruptured like so much wet paper, and allowed the contents to escape into the pelvic and abdominal cavities. The remaining sacs, four in number, were then rapidly evacuated, and the tumor lifted out; its pedicle was transfixed by a needle carrying a double silk ligature, which was cut and tied each way.

The pedicle was then cut off 1 Cm. from the ligature, and dropped into the abdominal cavity, the ends of the ligature being brought out at the lower angle of the wound.

The walls were carefully sponged out with warm, carbolated water; and, after having been exposed to a strong light, to make sure that all hæmorrhage from the ruptured vessels in the adhesions had been entirely controlled, were brought together with nine interrupted silver sutures. Between each a long, adhesive strap enclosed half the abdominal circumference. Over this was placed a dressing of carbolated cotton — this held in place by a wide flannel bandage.

The patient reacted nicely from the anæsthetic and shock, and for six hours appeared to be doing extremely well. Soon, however, I detected a failure in the volume of the radial pulse, which led to the suspicion that passive hæmorrhage was taking place from the myriad minute vessels which had been torn in breaking up the abdominal adhesions. Examination confirmed this suspicion, and, in spite of every effort to check this, the patient expired in four and one-half hours, from exhaustion. Notwithstanding the various aspirations, the tumor weighed 31.63 kilograms. A small sac at the posterior part of the tumor was found to contain nearly five kilograms of clear pus.

The chief regret is that the case was not seen at an earlier date, before disease had so far exhausted the strength of the patient that the tonic contractions of the minute vessels might have persisted in controlling the hæmorrhage.

Case VI. Was called Nov. 13th, 1878, to see Mrs. S. F., aged 58. Multipara, small and active. I found the patient had been suffering for some two years, with severe epigastric neuralgia, pain in the back and nervousness. Examination revealed a fluctuating tumor extending from the cul-de-sac of Douglass to the ensiform cartilage. Wave motion was not distinct. The womb and bladder were drawn far up out of place; the margin of the os being two centimeters above the crest of the pubis. I aspirated from the vagina and drew off one kilogram of clear transparent fluid, the consistence of glycerine. With the needle still *in situ*, after having emptied the sac, attached the negative pole of an 18 cell zinc-carbon battery with the positive over the abdomen, I allowed the current to flow ten minutes.

November 17th. Circumference at the most prominent part of the tumor has decreased fifteen centimeters; passed the continuous current, from vagina to umbilicus, with 18 cells. November 23d, I aspirated at the umbilicus and evacuated another sac containing, one kilogram of clear amber-colored fluid and passed the same current for ten minutes from aspirator needle to sacrum. November 30th, I aspirated in left superior inguinal region and obtained only a small amount of reddish serum, and passed the same current through the tumor. The abdominal dimensions diminished eight centimeters. December 4th, I aspirated in the right umbilical region and obtained two kilograms of clear serum. I sent a specimen of this fluid, and also that from case V., to Prof. Wm. H. Byford, of Chicago, who, without any data whatever, from microscopical examination, confirmed my diagnosis of ovarian cyst in case V. and of ovarian and ligamentous cysts in case VI. December 17th, I aspirated from the vagina and drew off one kilogram; the patient complained that the treatment following this aspiration gave more pain than usual. December 26th, I aspirated and drew off two kilograms of serum; the tumor has decreased four centimeters since last treatment. January 2d, I saw the patient, who was suffering from intense pain in the small of the back; urine scanty and high colored, bowels constipated for several days, some febrile symptoms and chills. I gave quinine to counteract any malarial or septic poison and morphia to relieve pain; also ordered a laxative.

January 5th: The bowels have not moved, urine scanty; I introduced a catheter, which withdrew only a small quantity; I ordered a stronger cathartic and an injection in case the latter failed; pain less and fever not so marked; no chill since last visit. January 8th: No movement; some vomiting; injection was a complete failure; otherwise the patient is better; attached stomach tube to syringe and attempted to pass well up into the colon; found resisting obstructions ten or fifteen centimeters from rectum, beyond which neither tube nor fluid could be passed; hot fermentations were ordered over the bowels, in hopes of relaxing the parts. January 10th I found the patient but slightly rallied, she had had no movement; urine slightly better; on explaining the probable complication to the patient and family and advising an immediate operation, as the only possible chance of prolonging life, they at once consented; with the assistance of Dr. S. W. Gillespie, the only medical gentleman at hand, and the very able help of Mrs. Z. Hawley, I proceeded to operate under the carbolized spray. On opening the abdominal cavity in the usual manner, the displaced uterus and bladder presented upon the anterior aspect of the tumor; these organs were then pushed as much as possible out of the way and the dense adhesions of the tumor to the peritoneum were broken up with the hand. This having been carefully and expeditiously accomplished, the division of the broad ligament was commenced, and he who has attempted to remove the entire broad ligament in a cystic degeneration with its vessels enlarged and engorged, can well appreciate the task. With the dense adhesions in the cul-de-sac of Douglas, and the careful separation of the posterior membranes from the pelvic viscera, the time consumed in the removal was forty minutes. The right ovary, which formed a portion of the cystic mass, was next lifted up, its pedicle transfixed and tied each way. The cysts, fifteen in number, were then evacuated with the "Spencer Wells" trochar, the pedicle cut and secured, and the mass lifted out of the abdominal cavity. In doing this, the pressure ruptured a sac at the posterior aspect of the mass, and allowed a large quantity of decomposed pus to escape into the pelvic and abdominal cavities, bathing the freshly torn surfaces with this morbid agent. This was at once sponged out with warm

carbolated water, and after ascertaining that there were no bleeding twigs, the walls were approximated with eight silver wire sutures, a strong strip of adhesive strap applied between each suture, a layer of carbolated cotton placed over the the incision and the whole secured by a wide flannel bandage.

The patient rallied well from the anæsthetic and operation, and, upon being told of the accident, replied she was glad the attempt had been made, and that it was an accident no care could have guarded against. After this, the patient conversed with her friends and left directions, messages, etc. About six hours from the time of the completion of the operation she began to fall into a lethargic condition, which continued to increase in spite of all efforts to stimulate, and ten hours from the operation death put an end to the scene, the patient falling into a profound coma. There was no hæmorrhage after the operation, and although, of necessity, there was considerable during that time, yet not enough to materially weaken the patient; every step being finished before the next was commenced.

Was the lethargic coma the result of the rapid absorption of pus by the peritoneal vessels or was it the result of exhaustion? The pulse was good until within two or three hours of death, and there were no signs of weakness; nothing except the heavy breathing, growing slower and slower until it ceased entirely. The reaction from the anæsthetic was most perfect.

Although the course pursued in the two cases last recorded was not crowned with success, yet the operations were just as imperative, and perhaps more so, than in the previous cases. For, in these two cases, operative procedure was the only chance of evading certain, speedy and painful death. While the chances were, of course, very much against recovery, yet we should avail ourselves of that chance whenever practicable.

While it is to be regretted that in case V the true pathology was not sooner understood, and, while in the condition in which the patient was found, death was the *probable* result of an operation, yet, if left to nature, the same result would have been sure and speedy.

In case VI, with the complication of an ovarian and ligamentous cyst, procrastination was one of the fatal factors. Although

the necessary laceration of peritoneal tissue in the removal of the entire broad ligament caused by the large dense adhesions, was a grave factor, yet it was not necessarily fatal. This case had been diagnosticated during a period of two years as ovaritis, fibroma, sarcoma, retro-uterine hematocele, and even pregnancy. Amidst all these conflicting diagnoses, the wonder is that the true pathology was not stumbled upon. In this case the query arises, would it not have been better to have operated at once instead of attempting palliative measures? The weight of authority seems to be, in similar cases, to aspirate and only to operate as a last resort. In this case it is highly probable that the repeated aspirations favored the formation of the extensive and dense adhesions, by setting by circumscribed points of sub-acute peritonitis. Although there was no evidence of this, either upon the anterior or inferior posterior aspect of the tumor—the adhesions being universally dense and compact—yet the fear that this might have been instrumental in producing the result, prompts us to examine the case critically before dismissing it from our minds. The adhesions in the true pelvis were well marked when the case was first seen, and the commencement was referred by the patient to exposure and an uncomfortable position sustained during a journey of ten miles on an intensely cold day. Three vaginal aspirations were made during the treatment, and a careful examination gave no indication of their locality, on inspection after the operation; leading to the conclusion that their local results had disappeared.

ARTICLE III.

OF MISCARRIAGE, AND ESPECIALLY OF THE USE OF LOOMIS' FORCEPS IN ITS MANAGEMENT.

By Henry A. Martin, M.D., of Boston, Mass. Read before the Norfolk Medical Society, Dec. 11th, 1877.

It is not my intention to offer a paper on the whole very important subject of *abortion*, but merely a few remarks on the treatment of a class of cases, of very frequent occurrence, and very often of a very tedious and troublesome character. That

I should make these remarks was the suggestion of one of our younger members, who was very much struck by the facility with which the contents of the uterus were removed by the use of an instrument not so generally known and appreciated as it should be. What was novel and interesting to him he thought might be also new and interesting to others, and hence his suggestion.

Honest miscarriage is a very frequent occurrence among the lower laboring classes, as a result of hard work and all the various shocks which that sort of flesh is heir to. *Dis*honest miscarriage is a very frequent occurrence in the upper and so-called better classes, principally as a result of criminal proceedings with the special object of inducing it. In thirty-three years of practice I have treated a very large number of cases of unpremeditated abortion, a certain number in which I ascertained it to be intentionally induced, and a good many in which I was informed that it was accidental, but in which I felt very confident that it was not so. I do not propose at all to discourse upon the moral aspect of abortion and have felt very little inclined that way since hearing, many years since, a very moral and highly Pecksniffian oration on the subject from one of our brethren, who to my certain and absolute knowledge, had added largely to his income by the practice of this infernal specialty.

Whether accidentally or intentionally induced, there is very little difference in the character and difficulties which abortion presents to the practitioner. However produced, there is one thing essential in the treatment of these cases, viz., to empty the uterus as soon as that can be done with safety, to thoroughly ascertain that it is entirely emptied and never to cease supervision of the case until that end is accomplished. So long as a particle of the ovum remains in the uterus there is danger, great and imminent danger of exhausting and most permanently injurious, if not fatal, hæmorrhage, a lesser and less imminent danger of septic absorption and its miserable train of consequences. The books tell you that when called to a case of threatened miscarriage, with intermitting contractions of uterus, discharge of coagula, pain in the back, etc., you are to give opium, prescribe the recumbent position and take various other steps, all with a view

of arresting abortion and saving fœtal life. I have repeatedly followed these time-honored directions; in some instances I have succeeded in postponing the completion of abortion for weeks, even months, but never that I can remember in preventing its final accomplishment. That in some cases of threatened abortion it is worth while to pursue treatment in the hope of averting it I will not deny, but in a very large proportion of these cases such treatment is bad, serving only to protract the duration of the case and aggravate the injury to the health of the mother. In certainly ninety per cent. of all the cases I have seen, the thing clearly to be done, and as soon as possible, without violence and undue manipulation, has been to empty the uterus.

How is this to be done? In some few cases very easily; cases in which the os uteri is sufficiently dilated and the ovum or its remains sufficiently protruded and accessible. In such cases, the patient lying on the left side, in the usual position, the left hand of the physician applied with moderate pressure to the lower part of the abdomen over the fundus, the two first fingers of the right hand introduced into the vagina seize the protruded portion of the ovum between them, and by gentle, steady, gradual traction all may be removed *en masse*. Simple as is this little operation, I have known a case in which a woman came very near to death for want of it. A practitioner was called to a woman with the usual symptoms of abortion, was told by the attendant beldame that "it" had all "come away." He took her word for it and visited the patient daily with laudable assiduity, doubtless not forgetting each day to charge his visit. Every day and all day she bled; he gave opium, sugar of lead, brandy, beef tea and all the rest of it, but never made an examination *per vaginam*, because the old woman had told him that all had "come away," although indeed nothing had been discharged but the fœtus; a very frequent mistake and one against which the physician should always be on guard. On the evening of the ninth day of his attendance he informed the husband that although he had done so much, had done everything, the woman would almost surely die within twenty-four hours.

Under these circumstances I was called in, removed with my fingers and with the utmost ease, a mass of coagulum and *debris*

of the ovum of the size of a large English walnut, in a putrescent state, which was lying just within the os uteri. A full dose of ergot was given, bleeding stopped at once and, after a few days of doubt, the woman rapidly recovered. I was quite unaware, when I made the visit, that any physician had been in attendance and rated the husband soundly for his neglect only to be told that an experienced one had been in daily attendance for nine days. The doctor was, I believe, very indignant that I stepped in to invalidate his prognosis, and I suppose, if I had known of his attendance, which I am very glad I did not, that medical etiquette would have demanded this in addition to an army of previous similar victims. This case illustrates the absurdity of depending on the statement of anybody in regard to the evacuation of the uterus in these cases. I always ask to *see* what has been discharged, examine this completely. If I find what satisfies me *perfectly* that the ovum has been *entirely* expelled, I save myself and the patient the trouble of an examination ; but I do not find this in one case in twenty. The fœtus, almost always, except in very early abortions, comes away separately and alone ; this is one of the earliest, sometimes *the* earliest symptom. It is a very common notion with even the most erudite of the matrons who infest these cases ; ladies who repel with great scorn and feeling the slightest imputation on the accuracy and fullness of their knowledge and experience, that this is all that is to come. Sometimes a number of coagula are expelled ; some of these often present an appearance of and, on examination, even a pseudo-membranous texture in parts which may deceive the inexperienced practitioner and lead him to suppose that the total membrane and elementary placenta is present, but if carefully broken up in a basin of water it becomes evident that they are but masses of coagulated blood. Such masses in the uterus and protruding through the os are sometimes mistaken for the ovum, are removed and attendance discontinued, when in fact nothing has really been accomplished for the patient's relief.

In some cases you will find the membranes protruding from the os so that they may be seized between the fingers or the jaws of a polypus or other similar forceps, or by some such instrument as Dewees' placental hook ; but the part seized breaking away, the

main mass remains unmoved, and this removal of its lower and accessible portion renders the case much more unmanageable. Sometimes you will be able to barely touch the lower extremity of the intra-uterine mass with the tip of the exploring finger, but quite unable to seize it between the fingers or to hook the fore-finger over or into the mass so as to remove it. I need not, however, enter into an elaborate enumeration of the various difficulties found in these cases, due to (1) the friable nature of the mass to be removed; (2) an undilated condition of the os and cervix uteri; (3) the adherence of a portion of the mass to the uterine wall. They are familiar to all who have had any considerable experience in such cases and may be imagined by those who have not. To the theoretical student or practitioner it may seem a very simple and easy matter to take almost any sort of crotchet or hook, like that devised by Dewees, or any sort of a polypus or uterine forceps and remove the aborted ovum. Practically, however, it is by no means an easy matter. It is very easy generally to remove the lower portion of the mass, but doing this is doing nothing, less than nothing. So long as any portion remains in the uterus, any portion however small, attached to the uterine wall, the dangers of the case still remain. The books tell you to wait, to thrust a sponge tent into the os sometimes, to tampon the vagina; the first with a view to dilate the os and so enable the operator to reach and remove the ovum, and the second to prevent injury or even fatal loss of blood from the often very profuse hæmorrhage.

Lately an instrument with the fascinating name of *Colpeurynter*, has been invented by a Dr. Braun, and is much admired by that modern school of physicians (so much lauded by our precious *Boston Medical Journal*), who are ready to applaud any gimcrack so it be invented in Germany, and by those who have never attended a single bad case of hæmorrhage from abortion. It is a bag of thin smooth rubber; introduced into the vagina in a flaccid empty state, it is then distended with air by means of a sort of bellows, and is intended as a substitute for the old fashioned tampon composed of soft old rags, raw cotton, sponges, or similar substances. The tampon is bad enough, but if properly introduced, which it generally is not, it is pretty effectual in pre-

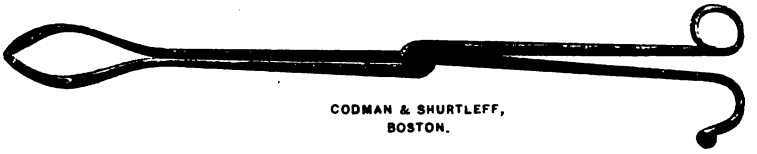
venting excessive hæmorrhage from the vagina. One of its great advantages, arises from the nature of the substances of which it is composed absorbing the serous part of the blood and favoring the formation of firm coagula which cling to its ragged surface. The *colpeurynter*, as a substitute for it in cases where any such appliance is at all desirable, is good for nothing. If sufficiently distended to be effectual it is the cause of great pain and almost intolerable distress. For a few minutes, so distended, it may prevent the flow of blood past it, but does so only for a few minutes, after which the fluid blood finds a free passage between its smooth surface and the expanded and expanding wall.

When the first *colpeurynter* was brought to Boston it was exhibited to an admiring company of physicians. I alone objected to it, theoretically, and since that time my objection to it, at any rate as a substitute for the tampon, has been amply sustained by practical observation and experience. It is worthless, worse than worthless, for the inexperienced physician, having introduced it, relies on it while his patient is bleeding excessively, perhaps to death or very near it.

That it may be and is of use in some of the requirements of gynæcology, I am well aware. My objections to it are as a substitute for the tampon as a means of preventing excessive uterine hæmorrhage. It is not, however, necessary for me to further discuss this very over-estimated novelty. In the vast proportion of cases in which either the tampon or *colpeurynter* is employed neither is necessary or advisable. The cases may be easily and safely terminated, so far as removal of the ovum and consequent cessation of hæmorrhage is concerned, by the proper and skilful use of the very ingenious instrument called *Loomis' forceps.*

I am quite unable to give you any account of the time and place of its invention and it is needless for me to describe it very elaborately, as I offer it for your examination.

[Through the courteous loan, from Messrs. Codman & Shurtleff, of a *cliche* from one of their wood-cuts, I am enabled to introduce here excellent illustrations of Loomis' forceps. (1.) With the blades as when the ovum is embraced between them; (2), the blades, one within the other, as they should be when introduced into the uterus.]



I purchased this instrument more than ten years ago. I have used it in a great many, probably hundreds of cases, and since I became quite familiar with the proper method of using it, with *invariable* satisfaction and success. I strongly commend it to your consideration and adoption. You will perceive that it consists essentially of two miniature curved fenestrated blades like those of an ordinary obstetric forceps, attached to shanks, at the extremity of one of which is a ring like that of the proximal end of a scissor blade, while at the extremity of the other is a sort of hook or crotchet which fits over the outside of the ring. The entire length of the instrument is about 14 inches. Midway in this length the two shanks are united by a very ingenious mechanical device, a joint, the technical name of which I am ignorant of, but by means of which the blade connected with the hooked handle may be made to revolve to a certain limited extent. It is not very easy to describe the instrument intelligibly but you see at once, on examination, the peculiar mechanism and its object. When the hooked handle is applied to the outside of the ring the two curved rings lie closely one within the other, just like two spoons laid together. With the two blades so laid one within the other the instrument is ready for use. The patient is to be laid on the left side, with the breech at the very edge of the bed, the trunk at an angle of 45 degrees, with its side and the knees well drawn up towards the chest. The tip of the forefinger of the left hand of the operator is to be applied to the posterior side of the *os uteri*. The instrument, properly warmed and well smeared with lard or cosmoline or vaseline, either of the latter the best possible substance for such purposes, held in the right hand, is to be introduced. The convex surface of the conjoined blades gliding over the left forefinger to the *os* are to be gently passed into

the uterine cavity with care, that they be made to sweep over its posterior wall. Unless the *os* is very unusually rigid and undilatable this can almost always be done very easily. Even where there is considerable rigidity and deficient dilatation, a little gentle manipulation will enable the blades to pass beyond the cervix. In some cases it may be necessary to introduce a sponge tent to sufficiently dilate the cervix to admit the instrument. This is something, however, that I am very much disinclined to do, feeling sure that the introduction of tents of compressed sponge is by no means so universally innocuous a proceeding as seems to be thought by many practitioners. I have found it necessary to dilate the *os* by sponge tents in but two cases of miscarriage. Generally a few minutes gentle dilatation with the forefinger will be sufficient. I need hardly say that all manipulation, whether with the finger or the instrument, should be gentle, as indeed in all obstetric operations. There can be no doubt that obstetric operators are sometimes oblivious of those two precious axioms *festina lente* and *arte non vi*, but although some of the operative proceedings in this branch of surgery require very considerable muscular strength, it should be strength tempered by gentleness, and this I have more than once witnessed *not* to be the opinion, or at any rate *the practice*, of men who, deservedly or not, have stood very high in the obstetric part of our profession. It is very important that the convex surface of the conjoined blades should be pressed against and glide over the posterior wall of the uterus. If this is not carefully attended to the point of the instrument is pressed against the lower extremity of the mass to be removed, the operator thinks that it has reached the *fundus*, takes the next step of the operation, and withdrawing the instrument, necessarily withdraws nothing with it, and accomplishes nothing. If the instrument is properly introduced its extremity reaches the fundus with great ease. When this is accomplished in an abortion at the most usual time, say fourteen weeks, it will be found that the entire fenestrated portion and from one inch to even two inches more of the instrument has passed beyond the *os*. When the extremity of the blades has reached the *fundus*, to do which, in some cases a portion of the ovum is separated from the uterine wall, the next step is to de-

tach the crotchet from the ring handle to the right, slowly turning it in that direction till it has described half of a circle. When this is done, supposing the blades to have been fully introduced to the fundus, the contents of the uterus are necessarily included between them. The handles should next be made to revolve together once, with a view to fully detaching the *ovum* from the uterine wall. If the *cervix* is sufficiently dilated there is nothing more to do but to withdraw the instrument, which will be found to bring away the *ovum* or all of it that may have remained in the uterus. In many cases, however, the expanded blades cannot be withdrawn. In such cases the forefinger or two first fingers of the left hand must firmly support the uterus while gentle traction with the movement which the French call "a bascule," should be made with a view to dilate the *cervix*. In many cases a very slight amount of dilating force applied from within, in the end, will accomplish sufficient dilatation. In others, five or ten of patient, gentle dilatation may be necessary before the blades can be easily and safely withdrawn. In some cases, a small proportion of all, it may not be possible to withraw the expanded blades without an amount of manipulation hardly to be advised. In these cases it is well to withdraw the instrument and to re-introduce it with the blades applied to each other not so closely as before directed, but so that when introduced to the ovum they may be opened like the mandibles of a duck, pushed up towards the *fundus*, one blade gliding over the posterior, the other over the anterior wall of the uterus, with the intention of including the ovum between them. When this has been done, the operator brings the blades together as when the instrument was first introduced, and when it is withdrawn it will generally be found to bring the ovum or its *debris* with it. It is not easy for an unpracticed writer to describe very intelligently the simplest operation of surgery, and I can hardly hope to have succeeded where so many fail, but nothing can be simpler or more effective than this operation, if its different steps are deliberately and properly taken. The position of the patient is very important to a proper, easy and effectual accomplishment of its object. I know no instrument devised for the very important end of removing the *ovum* in abortion at all comparable in efficacy with this. With

the smaller bladed instrument* there are very few cases of miscarriage in which the great end of safe and rapid detachment and removal of the *ovum* cannot be accomplished. To gentlemen who have had no practical experience, sundry devices of the instrument-makers seem very charming, which, in practice, are found to be worse than worthless, and I know no other instrument with which it will not be found very difficult indeed, often impossible, to accomplish the *perfect* removal of the *ovum*. The object of this paper was chiefly to describe the use of *Loomis' Forceps*, and I have little more to say except a few words on a class of cases of abortion, very likely to deceive the practitioner if he depends on a partial removal of the ovum and trusts to luck that the rest will take care of itself. In a certain proportion of cases the ovum is very firmly attached to or near the fundus. The practitioner may pick away with his fingers or some hook or forceps, a large part of it; he may now think that he has got all away, for by an ordinary examination his forefinger discovers nothing remaining in the uterine cavity, and still he has really accomplished nothing, for at the *fundus* remains firmly attached, that portion of the chorion in which has commenced, or if abortion had not occurred would have soon been developed the formation of the placated mass. So long as a particle of this remains, there is no safety from hæmorrhage. I have known bleeding to go on for weeks, for months, when its only and unsuspected cause was a portion of the membrane of the ovum not larger than a cent, attached to the *fundus*. If a second physician had not been called in and by prompt and decided measures removed this placental atom, the patient would most surely have died, as it was she barely escaped. I have known a case of miscarriage at the end of the fifth month, in which a midwife forcibly extracted the placenta, or thought she had done so. The woman got up in a few days, and went about her usual avocations; five weeks after getting up, while standing in her kitchen, all at once a large black mass fell from vagina to the floor, and she began to flow very freely. She fainted, and I was sent for. I found on the

* The instrument which I have always employed is of the sort which was made at first with unnecessarily large blades. A smaller and lighter instrument is now made and is to be preferred. One of these was exhibited to the society when the paper was read.

floor an immense coagulum exactly moulded to the cavity of the distended uterus, and a profuse hæmorrhage going on. I passed my hand into the vagina, found the os well dilated, and after cleaning out much coagulated blood from the cavity of the uterus, discovered firmly attached, a little to one side of the *fundus*, a mass of the size of a medium English walnut, which, with some difficulty, I detached and took away. It was a piece of the placenta which the midwife had failed to remove six weeks before. It was firmly attached to the uterine wall, was not at all decomposed, and indeed seemed attached to the uterus in such a way as to be nourished by the vascular supply of the uterus. I could narrate, from my own experience, a great many illustrations of the great importance of removing every particle of the *ovum* in cases of abortion, but it is needless. I have no doubt that you all fully appreciate the importance of doing so, and my intention was not a discourse on the whole subject, but rather on a part, a very important part, of the treatment of these accidents.

I cannot resist, however, availing myself of the opportunity to narrate *one* experience of mine, particularly as I much desire to know whether any of my professional brethren of this society have ever encountered anything at all like it. A good many years ago I was called to a woman at the end of the fourth month of pregnancy. She was flooding, had intermitting pains, in a word, was miscarrying. She was well advanced in life, considerably over 35 years of age, and this was her first pregnancy. As is not unusual in similar circumstances, the *os uteri* and *cervix* were rigid and undilatable and I had a tedious time of it, being three days in attendance before the entire ovum was removed. When my attendance ceased, I impressed upon her the importance, in case of a future pregnancy, of her notifying her physician as soon as she should be aware of being pregnant and being guided by him in view of the great possibility of her again miscarrying. In about six months I was notified that she was again pregnant, gave her such directions as I considered proper, and in due time I delivered her without instrumental or other artificial aid, of a full grown child, which cried lustily once or twice and seemed vigorous at birth. I tied the cord, detached the infant and laid it in a shawl in a corner of the bed, and, being particu-

larly anxious that my patient should not lose blood unduly, which she could ill afford, placed my left hand over the *fundus* and, finding the uterus well contracted and the placenta detached, removed the latter. While I was just completing this process, I noticed that the infant was very pale and still. It was dead. My first terrible apprehension was that there had been hæmorrhage from the *funis*, but on examination, I found that there had been none. The child had been lying with its face quite uncovered. I told the father that I could not *certainly* explain the cause of death, but that an *autopsy*, if he wonld consent to it, would probably reveal a defect of formation of heart, or, if not that, the cause whatever it might be. He would not consent. He told me that he was quite satisfied that the death was in no way from any fault of mine, and that he would be resigned to it as to an unavoidable misfortune. I attended the mother until my attendance was no longer necessary, met her from time to time, was occasionally called to see her or her husband, and was on the pleasantest terms with both, till, some year and a half after the birth of her ill-starred baby, I met her in the street, saluted her cordially and was "*cut dead.*" I immediately went to her sister-in-law, a very old and attached patient, and asked her what it meant. With a good deal of difficulty I gradually got at the whole story. My patient, who had given me the "cut direct," was led to believe that she was again pregnant, her *menses* not having appeared for over five months. She intended to have me attend her, and followed the directions I had before given her, but a very benevolent and busy neighbor instructed her as to the very superior abilities and "good luck" of a professional brother and urged her, in view of the "bad luck" she had with me, to call in the fortunate relative alluded to. This person called on her, and seeing a woman not far from forty, and being at that time very busily engaged in the study of and effort to obtain reputation in gynæcology, informed the patient that she had uterine disease, and asked her to call at his office. She did so, the next day, the doctor examined her *thoroughly;* you may judge how he examined her from the fact that he informed her that her uterus was very much enlarged, its cavity being over 4½, nearly 5 inches in depth. What he applied or prescribed I know not, nor is it ma-

terial. The woman went home; about midnight she was seized with intermitting pains and a sanguineous discharge. The *gynæcologist* was sent for, most devotedly remained with his patient for many hours, and did not leave her till he had removed *something*, something which the woman and her husband wished to see, but something which the doctor, good, kind, considerate soul, would not show them. It was "too horrible," "something which Dr. Martin had left in her uterus at the time she had miscarried, over two years before." Now, gentlemen, brethren, of the New York Medical Society, did any of you ever hear of such a case as this so kindly, considerately and disinterestedly explained to poor, simple, credulous folk, by a distinguished brother? Is anything more needful to convince you of the great, the imperative necessity of fully and carefully evacuating the uterus in cases of miscarriage? That a fragment of a fourth month *ovum* should not only have remained in the uterus through and after a pregnancy and parturition at full term, but after that for many consecutive menstrual periods, and in about two years have grown not only too horrible for human sight, but also as large as "a good-sized wash-bowl," is surely very wonderful. Such marvels probably do not happen outside of Roxbury. I sincerely hope that you may be warned by the solemnity of this occurrence and so its repetition in any other part of this highly favored district may be avoided.

Seriously, gentlemen of the society, did you ever hear of a piece of professional ignorance and villainy equal to this I have narrated? A man so ignorant of his profession as to fail to diagnosticate pregnancy in the fifth month, who introduces Simpson's sound, induces abortion, and then, knowing that if he acceded to the natural wish of his poor victim, to see the "tumor" he had so skillfully removed, that no amount of ignorance or credulity could possibly blind her or her husband to the real character of that supposed tumor, refuses to show it, because it is "too horrible," throws on another physician utter blame and odium by an infamous, cowardly, infernal lie; the only way to save himself from the disgrace and ruin he so richly deserved and may yet receive. If our much-lauded Massachusetts Medical Society meant anything—if it was really a means to the end of purifying

and elevating the profession of Massachusetts, and not merely a contemptible effete oligarchy, the main end of which is to glorify a *coterie* of mediocrities, and to enable a ring of political doctors to control the profession of the State to its lasting detriment; if it were a society whose chief end was to maintain a proper police and *esprit du corps* in the profession, and not a body of practitioners merely who assemble annually to hear a string of cut and dried and quite impromptu speeches of mutual laudation, listen to a throng of young gentlemen, just back from Vienna, tell them how well they learned their lessons there and see some magical operations done by some Boston gentlemen who are eager to throw all this annual "ground bait" in the fond hope that it may bring fat country cases and fees to their net [the hospital] and their hook [their private practice], this would have been a very proper case to have brought to its notice, but those who know that "venerable" society as I know it, are very well aware that such villainy would meet with but ineffectual and reluctant censure. I long debated, hateful as are such suits, whether it were not best to bring an action at law against this professional "brother," but at last concluded to let it pass, with much more like it, trusting and believing that there will be a final audit of all these things, in a court above human corruption, before a judge with whom perjury and even the influence of the "Boston clique" can avail naught; a court and judge, such as is not to be found even in that very high-minded and quite immaculate body, "The Counsellors of the Massachusetts Medical Society."

Article IV.

A Case of Unusually Late Chloroform Asphyxia. By F. C. Hotz, M.D. Reported to the Chicago Medical Society, May 5, 1879.

Serious accidents during chloroform anæsthesia usually occur while the anæsthetic is being administered or immediately after it has been discontinued. Only when a patient has been submitted to a prolonged narcosis, accidents attributable to the action

of chloroform have been known to happen sometime after its discontinuance.*

But it is very unusual that a serious accident occurs at this late period to a patient who has received a minimum dose of chloroform, just sufficient to produce a short narcosis for the performance of a short operation.

For this reason I believe the following case is remarkable and worthy of being recorded:

On the 24th of February, at 3 o'clock p. m., Thomas Jones, aged 8 years, came to the Illinois Charitable Eye and Ear Infirmary for the operation for convergent strabismus. His mother, who accompanied him, informed me that he had not eaten anything since breakfast. For at a previous visit I had told her that the boy should take no dinner on the day of the operation.

The patient, a very bright and healthy boy, was so glad to get rid of his disfigurement that he submitted without the least struggle to the administration of chloroform. His lungs and heart were normal in every respect. Chloroform was administered in an Allis' inhaler, and after about five minutes the boy was profoundly asleep. The apparatus was then removed and the operation proceeded with. The right internal rectus muscle was first tenotomized, and during this time pulse and respiration were perfectly regular. I put the speculum in the left eye, pinched up a fold of conjunctiva over the left internal rectus, and was just going to incise it with scissors when the boy began to hiccough just as though he was going to vomit. Thinking it was an effort at vomiting, I withdrew the instruments; but at the same instant the boy's face assumed a deep dusky color, respiration ceased and the pupil of the left eye, though fully exposed to the light by the speculum, suddenly became dilated and immovable.

The tongue had not fallen back upon the epiglottis; but it was pulled out nevertheless. The foot end of the table was elevated at once, while I induced artificial respiration by rhythmic compressions of chest and abdomen. After a few minutes the lividity of the face began to disappear, the pupil became movable and

* In the table of deaths from chloroform from 1869 to 1879, compiled by Dr. L. Turnbull, for the second edition of his work, "The Advantages and Accidents of Artificial Anæsthesia," I find that in only ten cases out to 160, death occurred *after* the anæsthesia.

contracted. When the patient began breathing and the foot end of the table was let down, the hiccoughing paroxysm returned, but was stopped by quickly elevating the board again. While the patient was still in this position I completed the second operation. Perhaps ten minutes later, the boy woke up and recovered without the least nausea.

Remarks.—In order to set this case in its proper light, I may state that the chloroform was kept in a cupboard with the door closed; that its purity was proven by the chemical tests; that the whole quantity gradually dropped upon the inhaler did not exceed thirty minims; that the apparatus was not applied again after I had commenced the operation; and that the patient lay perfectly horizontally during the narcosis. There was no organic lesion of the heart, no mechanical obstruction of the larynx; and since the boy did not vomit after the operation, I do not believe the asphyxia in this patient was due to food having been drawn up temporarily into the trachea by any effort at vomiting. I am rather inclined to believe that the asphyxia was due to the depressing and poisonous influence of the chloroform upon the nervous centers. The center of respiration became paralyzed, its regulatory influence upon the rhythmical movements of the muscles of respiration ceased, these movements became irregular and respiration spasmodic, hiccoughing. The defective respiration quickly loaded the blood with carbonic acid and thus produced a state of asphyxia which brought the patient to the verge of death.

In my own experience of fifteen years, this case is the first instance that a short and regular narcosis assumes a serious aspect at a time when the anæsthetic has been discontinued for a number of minutes and when we are accustomed to considering the patient safe and near his recovery. Dr. Laurence Turnbull, of Philadelphia, to whom I communicated this case, wrote to me that "the case of the boy was not so remarkable as to the time of the asphyxia; for on consulting my table of deaths from chloroform, which I had prepared for my second edition, I find there were ten deaths after operations, with chloroform poisoning mentioned as the cause." Still the case seems a little remarkable considering the small amount of the chloroform used and the briefness of its administration. For among the ten cases in Dr. Turnbull's

list, there are only three which would compare with mine as to the short duration of the narcosis; in one case, chloroform was given for extracting a tooth; in the second case, for introducing a catheter; and in the third case, for the operation for fissure of the anus. In the other seven cases the amount of chloroform was larger (from two to twelve drachms) and the narcosis of a long duration (as for instance for amputation of thigh, parturition).

Dr. Turnbull also has kindly given me the notes of a case which is very similar to mine, but terminated fatally. A young girl, perhaps thirteen years, was operated upon by Professor Jaeger, of Vienna, for some trifling defect in her eye. The operation lasted but a few minutes, and was done under chloroform. A bandage was applied and the patient put to bed, already partly conscious. A few minutes later defective breathing with deep blueness of the skin was noticed. Agents for restoring consciousness were in vain employed; finally a tracheotomy was performed, and artificial respiration carried on by means of a bellows through the canula, but with no effect. Post mortem revealed nothing satisfactory.

ARTICLE V.

ANTISEPTIC SURGERY. By G. B. PRATT, M.D., Elkhart, Ind., late Resident Physician of the King's County Hospital, Brooklyn.

It would be very interesting, and demonstrate in a very forcible manner the world-wide interest taken in the subject of this article, could a collection be made of all the papers, pamphlets and books bearing on this subject, which have been written and published during the past few years. What a mass of literature, speaking in every language both *pro* and *con*, showing the spirit of advancement and the desire for a more perfect system, for better results, which animate the surgeon of to-day! And it may be asked, what subject is of more importance or of greater interest to the surgeon and the general practitioner as well, than that of the management of wounds? Are not the well-being and life of his patients, as well as his own

reputation, often dependent upon the results of such treatment? It is not very remarkable, therefore, that any method which claims to diminish the mortality and expedite the cure of these cases, should receive a ready welcome from every member of the medical profession.

Every innovation in surgery, though possessed, perhaps, of some good qualities, is attended by a host of useless and oftentimes injurious properties, but practical experience, attended by the sharp criticisms of practical minds, tends ere long to separate the wheat from the chaff, and while this is left to the winds, that is gathered into our store-houses of knowledge and carefully treasured for the use of future generations, until in the light of a more advanced knowledge that which we pronounced good will be again refined.

But there are certain great principles in surgery which have ever been, and always will be, the sure guides to the surgeon in the management of wounds, and any measure which will aid us in carrying out the more perfectly these rules, will command our respect and commendation. The cardinal principles in the treatment of wounds to which I refer are these: coaptation, drainage, cleanliness and rest, and these in order to be effective must be perfect, each in its way. There must be perfect coaptation, perfect drainage, perfect cleanliness and perfect rest; if one of these indications be neglected, the others will be unable to supply the deficiency, and thus their efforts at repair will prove abortive. As to what extent the "antiseptic method" will aid us in fulfilling these indications, or how essential the different steps of the method really are, are questions which the ablest minds in our profession are discussing at the present time.

To Mr. Joseph Lister undoubtedly belongs the honor of having carefully developed this method and conscientiously followed its teachings to the most minute proceeding, but he deserves the condemnation passed upon him by the Clinical Society of London for not making his results known, he having published but a few cases, and these mainly to illustrate his method. A writer in the *New York Medical Journal* says, "it seems to me the name of Joseph Lister must outrank in medicine all of his century, not excepting the discoverer of anæsthesia."

There are several antiseptic methods, all of which differ in some respects from that of Lister. As all are aware, Lister insists upon the use of the carbolic acid spray continuously. Mr. Callender uses no spray, but having tied the bleeding vessels with carbolized catgut, he washes out the stump with a carbolic solution of 1 to 20, and secures drainage by two pieces of carbolized gutta-percha, closing the wound with silver sutures. Over this he places a few layers of carbolized lint, covered by a sheet of gutta-percha, next a thick layer of cotton-wool, and finally a bandage. Rest is secured by a stump splint, hinged to allow ready re-dressing. His results after capital operation have never been equaled.

Mr. Holmes has followed Lister in all the details excepting the spray only, and the results obtained in his practice, including treatment of compound fractures, have been quite remarkable. Mr. Gamgee prefers treating wounds by dry and infrequent dressings, rest and pressure. The edges of the wound are brought in perfect coaptation by silver sutures, a gauze and oakum pad placed over the wound and drainage secured by means of rubber tubing; cotton wool is then placed over all, and a splint applied in treating a limb and perfect rest secured. The dressings are not removed, unless demanded, until the ninth day. He reports excellent results. In these methods cited, primary union is aimed at, the same as by the Lister plan.

Dr. James R. Wood has made known the success which may attend the use of a method first introduced in the early part of this century by Kern, a Vienna surgeon. In this, which is called the open treatment, and the cotton wool dressing of Guérin, there is no attempt made at primary adhesion. Dr. Wood leaves the wound entirely open; perfect drainage is thus secured, and the parts are kept scrupulously clean by the frequent and free use of carbolic acid solution. He has published through his house-surgeon fourteen cases of amputation treated in this way without a single death.

M. Jules Guérin insists upon perfect occlusion with compression. He thoroughly washes the wound with carbolized water, packs in small masses of raw cotton, and, surrounding the stump with two or three layers of cotton wool, applies a linen band

tightly over all, then another layer of cotton, then another band, and so on until he has used several pounds of cotton wool. In a case in which he applied it, at St. Bartholomew's Hospital, London, he used up five pounds of cotton wool. He claims very flattering results from his dressing.

In Dr. Wood's method we follow two of the rules of surgery of which I have spoken, viz.: cleanliness and drainage; and rest may also be secured to a certain extent. Cases treated in this manner require a comparatively long time for healing, and are apt to become very tedious. This method illustrates what may be accomplished by meeting two of the indications perfectly, and would go to show that this spray was not absolutely indispensable to very good results under very bad circumstances. And when we remember that the ward in which his patients were treated had been vacated the previous year in consequence of puerperal fever, we will the better realize the disadvantages he had to contend with. Fourteen consecutive amputations and *no deaths*.

The question naturally arises in the mind of every surgeon, after reading such a report: Is the spray an essential factor to the most perfect result in the treatment of wounds? In other words, is the spray any benefit whatever, or is it simply a superfluous part of the Lister method, which may as well be dispensed with. If it is of no value, why burden ourselves with its use? In an editorial on this subject in a recent number of the *Medical Record* the writer says,* "There is a growing conviction that the spray can be dispensed with, and that a thorough washing of the cut surfaces with an antiseptic fluid will accomplish the same end. If we were called upon to decide what was the most important element in Mr. Lister's dressing, we should say that it was his system of drainage, and to this, more than anything else, must be attributed his success." Billroth says,† "Scrupulous cleanliness and very careful draining away of all the discharges from the wound are by far the most important factors in the success of this method."

Bearing on the same subject Dr. Gross writes,‡ "The treat-

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*The *Medical Record*, March 1st, 1879, page 208.

†Billroth's Surgery, vol. 1, page 142.

‡Gross' System of Surgery, vol. 1, page 371.

ment of open wounds, of whatever character, is often greatly expedited by the employment of protective measures, not too frequently changed. The much-vaunted carbolic acid treatment of Mr. Lister owes, I have no doubt, more of its efficacy to this circumstance than to any special virtue of the acid itself." But statistics, in a discussion of this character should, and do, have more weight than the unsupported opinions of the best surgeons. In the mortality table prepared by Dr. R. F. Weir,* the per cent. of deaths following amputation of the thigh, leg, arm and forearm was 2.27 under Callender's treatment (without the use of the spray), and after the method of Lister, reported by Volkmann, the per cent. was 3.09. The results attending Callender's management of wounds has never been equalled.

As an additional argument that the spray may be done away with, I would refer to the success of Mr. Lister himself, in his treatment of compound fractures; by simply washing out the wound with a carbolized solution he obtains as good results as by the use of the spray in operations. Besides the expense attending Lister's plan, those who have tried it will readily admit the great difficulty met with in trying to follow his directions exactly. There is sure to be some mishap during the operation, some instrument or some assistant's hands failed of being washed with the antiseptic solution, or the spray would be for an instant misdirected. Now as the germ theory constitutes the basis of Lister's antiseptic method, success in its practice can only be looked for with the aid of attention to minutiæ and details, and to extreme care in manipulation. One single cystic germ making its way to the surface of the wound would, in accordance with this theory, be sufficient to light up all the mischief which it is the object of this method to avert. Is it any wonder, then, that surgeons become discouraged, and question the necessity of a proceeding which is the occasion of so much annoyance, and which, though conducted with the utmost care, leaves very little hope that the effort has been successful?

I would not limit myself to a one-sided presentation of this question, being well aware there are many of the leading minds

* *New York Medical Journal*, January, 1878, page 51.

in our profession who strongly advocate Lister's system, in all its details, and who attribute their success to a faithful observance of the rules as laid down by him. In a letter from Berlin, in a recent number of the MEDICAL JOURNAL AND EXAMINER, the writer says of Langenbeck, "With the use of the antiseptic spray, he says that time has ceased to be an essential factor in the performance of most surgical operations."

Erichsen, after speaking of certain morbid conditions of the blood and constitutional derangements of the patient, says,* "It is undoubtedly these disturbing influences that prevent the complete success of Lister's method, in a certain number of cases. Theoretically, it is perfect, in practice its success is not constant."

A writer in the *London Lancet* remarks,† "The following cases may prove, I think, of interest to those already engaged in the practice of antiseptic surgery, or who may be (as I myself was for long) on the borderland of belief regarding the soundness of the doctrine on which it was based; a position from which I was ultimately driven by what I saw and heard during a long course of visits to Professor Lister's wards in the Edinburg Royal Infirmary."

I think, after all has been said and done, the homely adage (if I may be permitted to use it) that "every dog has his day," will be found to be just as true regarding Lister's antiseptic method as any new method for the treatment of disease, whether surgical or medical, which has ever been introduced, and that a modification of this plan will be fixed upon which will insure the closest observance of the four cardinal principles of the treatment of wounds. To this end the efforts of every surgeon should be directed. Let us strive to simplify rather than complicate surgical procedures, and it is a noteworthy fact that this is the tendency of the age; a healthy sign, and one which gives promise of grand results in the future.

ELKHART, Ind., April, 1879.

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*Erichsen's Surgery, vol. 1, page 174.

†Illustrations of Antiseptic Treatment in Minor Surgery. By J. C. O. Will, M.D. Am. Reprint October, 1878, page 443.

Clinical Reports.

ARTICLE VI.

CHICAGO HOSPITAL FOR WOMEN AND CHILDREN.

SERVICE OF DR. MARY H. THOMPSON. (Reported by L. Anna Ballard, M. D.)

The following cases of ovariotomy, taken from the records of the Chicago Hospital for Women and Children, present some points of interest, as these three successive cases terminated in perfect recovery, and illustrate the value of Lister's antiseptic method of operating.

Case I.—J. C. Aged 31. Single. Born in Scotland. Occupation, general housework.

She has generally been in good health, but has never been a strong woman. First menstruated at the age of 16. Never suffered unusual pain at menstrual periods. In May, 1877, she was kicked in the iliac region, which left a "soreness for several weeks."

In January, 1878, she first noticed a tumor in the right ovarian region just before a menstrual period, after which it enlarged rapidly. She suffered no inconvenience until July following, when sharp, stinging pains were felt in the left side. Menstruation occurred regularly up to the date of operation.

She consulted Dr. R. G. Bogue, who advised her to come to this hospital. Entered August 5, 1878. On examination by Drs. Bogue and Thompson, fluctuation was revealed by palpation. The enlargement of abdomen was symmetrical; depth of uterus over ten Ctm.; breathing oppressed. It was decided to perform paracentesis by means of trocar and canula inserted into the linea alba. Dr. Bogue drew from the cyst 8 litres of light brown fluid. This was done to confirm the diagnosis.

Aug. 15th. The patient was again examined by Dr. Bogue, who found the cyst filling with fluid, and advised her to leave the hospital until time for operation, which he thought would be in about two months.

Oct. 10th. She was readmitted. Abdomen full and tense. Breathing oppressed. Intense pain in the back, from which cause she had been for two weeks unable to sleep in a recumbent posture. Bowels inactive. Kidneys not secreting well.

She was put upon tonics and diuretics until the 19th, when Dr. Bogue, assisted by Dr. Thompson and others, removed a multilocular cyst weighing, with its contents, 15 kilog. There were adhesions all around the cyst. The cyst wall, though handled with due care, was so tender as to rupture, and let a large portion of the thick, tenacious fluid flow into the abdominal cavity, which was thoroughly sponged out with warm carbolized water; this process requiring several minutes.

The tumor was in the right broad ligament, involving ovary and Fallopian tube. A double ligature of white silk braid (carbolized) was applied to the pedicle very near the uterus, tied in two parts, and cut near the knots. The pedicle was then cut about one Ctm. from the ligature and dropped back into the abdomen. There was no hæmorrhage. Drainage tubes were inserted in the lower end of the incision, and the wound closed by four hare-lip pins, including the peritoneum in the sutures, and by five intermediate superficial silk sutures.

The operation was performed under the carbolized spray of 5 per cent. strength, sponges and instruments were kept well carbolized, and Lister's dressings were afterward applied.

The recovery was rapid and uninterrupted. On Nov. 14th the patient walked three miles. She has on several occasions since reported herself well.

Case II.—Mrs. M. F. C. Widow. Aged 50. Born in New York. Mother of five children. Menstruation began when the patient was about 14 years old, and recurred regularly to the time of the first pregnancy. For the past 24 years she has been subject to dysentery, having several attacks yearly. Sixteen years since was injured in a riot, the frontal bone being fractured. From this wound 9 small pieces of bone were removed. A few

months afterward she began having "fits," which continued for ten years.

She first noticed abdominal enlargement 7 years ago. It increased very slowly. She was treated in New York city for ascites. Three years since she was attacked by menorrhagia, which was followed by a sickness of which she can give little account. Once after this sickness she had an excessive menstrual flow, and since that time she has had complete prolapsus of the uterus.

She first entered this hospital Oct. 29th, 1877. Measured at umbillicus 108 Ctm. Depth of uterus 14 Ctm. Kidneys not secreting well. Was treated with tonics and diuretics without decrease of abdominal measurement.

Nov. 22d, 1877. Dr. Thompson called the hospital staff in consultation. The enlargement was diagnosticated to be, one or more ovarian cysts. Dr. Thompson aspirated the tumor, drawing away 12½ kilo. of a thick, foaming, brown fluid. The tonic and diuretic treatment was continued. During the winter and spring the patient was troubled with dysentery and various other temporary complaints.

January 25th, 1878. As respiration was becoming oppressed, and the patient could not make up her mind to submit to an operation, the tumor was again aspirated. The fluid which was taken away measured 12½ kilo., and was of a dark brown color.

August 26th, 1878. She left the hospital, intending to return in the fall for an operation.

November 19th, 1878. The patient returned. Her general health was good. Abdomen very large. Respiration not greatly disturbed.

December 4th, Dr. Mary H. Thompson, assisted by Drs. Byford, Bogue and others, removed a multilocular cyst weighing 1⅓ myrg. pounds and containing 13 kilo. of dark, ropy fluid. There were no adhesions about the superior portion, but at the base of the tumor the adhesions were extensive and strong. This cyst was taken from the left, broad ligament; the pedicle was ligated with a double, white silk carbolized braid which divided the pedicle into two parts, and was tied on opposite sides. The ligatures were then cut short, and the pedicle, cut about one

Ctm. from the ligatures, was dropped into the abdominal cavity. The right Fallopian tube and ovarian ligament were ligated, cut and dropped into the abdomnal cavity, in the same manner as the pedicle; as they were found firmly adherent by inflammation to the tumor, or rather the ovary was apparently absorbed, as it was not found. The incision was closed by five silver wire sutures including the peritoneum, and three superficial sutures of carbolized silk. The sutures were removed on the tenth day, and the whole abdomen covered with resin adhesive plaster in such manner as to keep the wound united and support the abdominal walls.

This operation was also conducted according to Lister' antiseptic method.

The wound healed by first intention, and the recovery of the patient progressed with almost no disturbance of the system.

Case III. Miss H. F., a teacher, aged 24, born in Canada of Scotch parents, was admitted into the Hospital for Women and Children Jan. 28. 1879.

Health always good. Menstruation began at age of fifteen; never painful, and always flowed freely three or four days.

Came to the West about eighteen months ago. Gradually "increased in flesh" after leaving Canada. First noticed abdominal enlargement July, 1878. In August, her stomach became so irritable that she could eat almost nothing until the past month. Menses, scanty and painful in September, 1878, ceased entirely in November. The enlargement increased rapidly after the menses ceased. During the last period (in which she should have menstruated) before the operation, which occurred just after her entering the hospital, her size increased, so rapidly as to be noticed by every one who saw her daily, and considerable œdema of the feet came on.

During the summer the urine was dark and contained a pink sediment. A few weeks ago it had a "milky look." At present it is free, with sediment of urates and phosphates.

During the past month her health has been good, except a pain over the left portion of her abdomen and across the lower part of her back.

On examination by Dr. Thompson the fundus of the uterus

was found pressed forward between the pubes and the tumor, posteriorly. Fluctuation was detected in the abdomen. Measurement, 97 Ctm. at the umbilicus.

On Feb. 5, at 2.15 p. m., the patient was anæsthetized by Dr. Bottsford, with the intention of concluding the diagnosis by aspiration, but on examination by Drs. Bogue and Thompson the case seemed so clearly one of ovarian tumor, that it was decided to proceed in the usual manner for the removal of the tumor. Physicians present were Drs. Thompson, Bogue, Bartlett, Groesbeck, Bottsford, Gaston, Barlow and Ballard; besides Miss Akers and others.

Dr. Thompson, assisted by Drs. Bogue, Bartlett and Gaston, performed the operation under the carbolized spray. An incision was made in the median line, which extended from about 2 Ctm. below the umbilicus downward about 10 Ctm. When the sac was reached, Spencer Wells' trocar, with tubing attached, was thrust into it. The operator then tried to introduce her hand to break up the adhesions; but finding the incision too small to work to advantage, enlarged it about 1½ Ctm. Adhesions were then found over the superior portion of the tumor, which were severed; and the sac was then removed from the abdominal cavity. The pedicle was pierced near the uterus by a large needle armed with a double silk braid (carbolized), and the ligatures tied upon opposite sides, dividing it into two parts. The pedicle was then cut, leaving a short stump of about 1 Ctm. in length, and dropped back into the abdominal cavity. On examination of the right ovary, it was found to contain one or more cysts, and was removed with the outer portion of the Fallopian tube. The hæmorrhage was quite free, but no vessels were ligated. The cavity was carefully sponged out to cleanse it of the blood which had poured into it. Evidence of considerable inflammation existed in the thickened, rough and dark red peritoneum.

The incision was closed with one superficial and eight deep sutures, all of silver wire; but in twisting the wires, the second and third from the lower end of the wound broke, and superficial wire sutures were put in their places.*

*This wire was supposed to have been affected by lying in carbolized water for an hour at a time at several different times.

Lister's dressings and flannel bandage were applied, and the patient put to bed at 3:30, P. M. Pulse 108.

Fluid from the cyst measured 14 litres, and weighed 15 kilo. The cyst weighed 2 kilo.

At 5:30, P. M., when the patient awoke from the effects of the anæsthetic, she was given 0.15 of quinine and 0.02 of morphia. 7 P. M., pulse 120; 9 P. M., pulse 132, temp. 39°.

Sixth, 5 A. M. Vomited; could only tolerate milk diet; 3 P. M. vomited again. Pulse, 116.

Seventh. Nausea continued until this morning, and could take no food.

Eighth, 7 A. M. Temp. dropped to 37.3°; pulse, 88.

Ninth, 8 P. M. Temp. 38.4°; pulse, 102. Both gradually dropped to the *normal standard* in the early part of the succeeding day.

Tenth. Removed five sutures.

Eleventh. The remaining sutures were removed and adhesive straps applied.

Fourteenth. Patient removed to another bed. In two weeks from the time of the operation she was apparently well, but weak; at this date reports herself well.

In the last two cases there was not even a drop of pus in or about the incisions or sutures. It was Dr. Thompson's opinion that the nausea and vomiting in the last case were caused by the morphine, which was changed to tr. opii then to tr. opii et camph.

NOTES FROM PRIVATE PRACTICE.

ARTICLE VII.

CASE OF GANGRENE OF THE LEG, FROM PHLEGMASIA DOLENS; AMPUTATION; RECOVERY—ALSO, A CASE OF TRACHEOTOMY FOR TUMOR AT THE GLOTTIS; RECOVERY. Reported to the Chicago Medical Society, April 21st, 1879.

I. *Phlegmasia Dolens.*

Mrs. J. married, aged twenty-four years, healthy, delivered Feb. 18th, 1878; first child; labor natural and not severe nor prolonged; remained very comfortable with apprarently nothing

out of the way until the 23d, when severe pain began in the calf of the left leg, which steadily increased in severity until it became terrific, necessitating large doses of opiates to give relief, even to the extent of a grain of morphine hypodermically at a time. The leg was swollen but little, and only moderately tender. The pain continued in its severity, without much change in the limb, except moderate swelling and some tenderness behind the knee, until the morning of the 2d of March, when there was noticed a dark colored spot on the ball of the foot and upon the side of the great toe. The severe pain continued and the discoloration and coldness and loss of sensation rapidly extended, so that on the afternoon of the 5th of March the limb was thoroughly in gangrene, from the middle of the leg downward, the whole member but little swollen; the foot a little shrunken. There was tenderness behind the knee and along the course of the femoral vessels, the latter very slight; pulsation of the femoral, just below Poupart's ligament, was quite feeble; the heart beat about eighty times per minute, and intermittent; the long saphena vein was neither distended nor tender.

At this date, the 5th, I first saw the case, with Dr. Hessert, who was in attendance on the case and had been since the evening of the 2d. There was very little or no odor from the limb. It was well wrapped in flannel, wet with a solution of alcohol, covered by rubber cloth, and surrounded by bags of hot bran or hot sand. There was given 0.25 of salicin four times a day, and opium sufficient to relieve the pain. She was encouraged to take milk, soup, coffee, eggs and any other food she desired, and a moderate amount of stimulant. By the 7th the gangrene had extended to within about five inches of the knee, the leg above the gangrene somewhat inflamed, the thigh swollen and a red tender line along the track of the lymphatics. There was rather less pain, or it was not so severe continuously, yet there were spells of severe pain. The patient was eating fairly, but felt a good deal depressed. There had been not more than the usual amount of lochia; it had been offensive, but had now ceased. She had at no time complained of pain, or discomfort even, in the lower part of the abdomen or pelvis. The patient continued in about this condition, really not losing ground and the gan-

grene not extending, suffering less pain, pulse becoming steady and ranging from one hundred and twelve to one hundred and twenty per minute, up to the 14th, when there was less inflammation of the thigh and upper portion of the leg, with a line of demarcation beginning to form; there was a good deal of odor now from the limb. Amputation was now advised as soon as the line of demarcation should be fairly established.

On the morning of the 16th, with the assistance of Drs. Hessert, Hooper, Bert and Hann, I amputated the limb at the knee joint. There was not room to make a stump below this point and further I believed disarticulation a safer operation than amputation either just below or just above the joint. The thigh was quite œdematous, but soft. The soft parts at the point of operation, were quite firm, from infiltration with sero-plastic effusion. Lateral flaps, according to Stephen Smith's plan, were made, brought together and secured by three or four sutures in the anterior two-thirds, the posterior portion being left open so as to secure free drainage. The thigh was supported by a many-tailed bandage, and the stump dressed with carbolated water, and rested upon a small pillow, which was afterward changed to an air pillow. The flaps were composed of skin and subcutaneous connective tissue, the straight part of the incision posteriorly extending upward to a point squarely behind the joint, the soft tissues in the popliteal space were divided at about the middle of the space, leaving barely the upper parts of the heads of the gastrocnemius.

At the point of division of the popliteal vessels the artery was patulous, but small; it was unobstructed as far downward as examined, which was beyond where it breaks up; it must have been unobstructed upward, for it throbbed after ligation as any large artery is wont to do in the end of a stump. But the two popliteal veins—there were two—and also all of the deep veins, were filled with firm clot, the subcutaneous ones being free. All of the veins in the popliteal space were plugged. In other words the whole system of deep veins of the leg was filled with thrombi, while the superficial one was not. How far upward there was thrombus of the deep veins of the thigh cannot be said, but certainly not above where the internal saphena joins, for this

was unobstructed. The patient recovered from the operation and progressed slowly to recovery. There was some burrowing of pus in the lower part of the thigh, which necessitated opening for drainage and cleansing. About two weeks after the operation there came on a phlegmasia dolens of the other limb; it was mild and gave but little pain, yet there was tenderness and hardness along the track of the femoral vessels. It served to pretty thoroughly frighten the patient and friends.

The diagnosis at first was gangrene from embolism of the femoral artery. As the gangrene occurred rather suddenly, no pulsation was to be felt in the leg nor popliteal region, and but feebly in the common and first portions of the superficial femoral and the saphenous vein was not obstructed; but it proved to be a case of gangrene from extensive occlusion of the veins; from that demonstrated condition of the veins, phlegmasia dolens implicating in this case the deep ones, leaving the superficial ones comparatively free. I judge that this result of the affection must be very rare, for I have found only bare mention made of it by Dr. Fordyce Barker, in his book on The Puerperal Diseases, saying that he had never seen a case, but that cases had been reported.

It would seem that gangrene occurred in this case as a consequence of the sudden obliteration of a large portion of the veins of the limb, thereby depriving the limb of sufficient capillary circulation to sustain it. And as there was not adequate means of returning the usual amount of blood from the limb, there was only a moderate amount sent to it, as shown by the feeble pulsation of the common femoral of that side as compared with the other.

2. *Tumor of Glottis; Tracheotomy.*

Willie Young, aged about 10 years; in July, 1875, began to cough, as of ordinary cold, which persisted with some expectoration of mucus. Cough became more and more troublesome and harsh; the breathing became noisy and at times a little difficult, especially when sleeping. He gradually lost flesh and steadily these evidences of interference with respiration referable to the larynx, became more pronounced.

In November when I saw him, respiration was performed with

some effort, becoming more difficult, when sleeping. Patient was emaciated, coughed and expectorated a good deal. Dr. H. A. Johnson saw him, and upon laryngoscopic examination there was found to be general chronic inflammation of the lower part of the pharynx, ulceration of the top of the epiglottis, and in the left aryteno-epiglottic fold a small tumor which folded that side of the epiglottis downward and toward the middle line, itself falling upon the glottic opening. The tumor, and general inflammatory swelling of the glottis encroached upon the opening so much that respiration was difficult, and especially so when the laryngeal muscles were off their guard during sleep or when there was spasm of the larynx, as occasionally happened. It was decided to apply to the parts by means of the hand atomizer a 4 per cent. solution of sulphate of zinc every second or third day, using once or twice a day a gargle of alum. Quinine was given, 0.15 morning and evening, and the taking of nourishing food was encouraged. All of this was to be tried, being ready to perform tracheotomy at any time in case of emergency. Instead of improvement, the respiration became more and more difficult, so that it was deemed best to resort to the operation, not waiting for emergency.

On January 2d, 1876, with the assistance of Drs. Johnson and John Bartlett, I operated; gave ether; opened the trachea and introduced a tube, after which he breathed perfectly easy, and slept quietly. There was a good deal of discharge of mucus through the tube from the bronchitis. The quinine was continued and the sulphate of zinc applied every other day to the parts by means of a pharyngeal or post-nasal syringe. The boy began to sleep well, eat well, breathe without any difficulty and regain his flesh. The general inflammation of the pharynx subsided, ulcer of the epiglottis healed, but the tumor remained red and about the same in size for a long time. In May he had an attack of whooping cough, for which I gave him pretty large doses of bromide of potassium and laurel water, which was continued for a couple of weeks or more. In the meantime the tumor had sensibly diminished in size. Iodide of potassium was combined with the bromide and given for about two months; the tumor gradually became smaller and the surface light-colored. From

the disappearance of most of the tumor and all of the inflammatory thickening, the opening to the larynx became quite free, and the boy could breathe very easily with the inner tube removed and the outer one plugged. In this way he respired through the larynx most of the day and through the tube at night. About the middle of October I removed the tube. At this time there was no obstruction, the tumor had shrunken away to a small nodule; the ulcer had healed, leaving some deformity of the epiglottis, the boy in good health, but had partial loss of voice. The opening in the neck closed within a few day after removal of the tube. He has had no return of laryngeal difficulty nor has he regained his voice.

Now, at the end of three years from the time of the operation the boy is well, having only a little harshness of respiration and able to speak in a tone about one-half between a good whisper and full voice. As to the nature of the tumor, I can give no decided opinion; its disappearance under the use of potassium would suggest a specific cause. Ulceration in that locality, probably implicating somewhat the vocal cords, although at no time was ulcer of them seen, would be suspicious. There are not apparent evidences of hereditary specific disease.

R. G. BOGUE, M.D.

CHICAGO.

IN THE GLASGOW DISPENSARY FOR SKIN DISEASES, a page in brilliant costume directs the patients to the several apartments, and a gentleman connected with one of the fashionable pharmacies of the city, dispenses the medicines ordered, which are supposed to be paid for. Will the Central Free Dispensary of Chicago suffer itself to be outdone by any such bloated institution in the "effete monarchies of Europe?"

WE are under obligations to Dr. Geo. H. Cushing, one of the Publication Committee of the American Dental Association, for plate and copy of the original and interesting report on Histology and Microscopy, by Dr. G. F. Waters, published in another column.

Society Reports.

ARTICLE VIII.

TRANSACTIONS OF THE CHICAGO GYNÆCOLOGICAL SOCIETY. Seventh Meeting, April 25th, 1879. H. P. Merriman, M.D., in the chair.

Dr. DeLaskie Miller read a paper on "The Management of the Third Stage of Labor," published in the present number of the JOURNAL AND EXAMINER.

DR. ETHERIDGE thought that the so-called milk fever was probably not due to mammary congestion, but to the absorption of septic matter through the abrasions about the parturient canal.

DR. ROLER was in perfect accord with the views expressed by the reader of the paper. There should be no haste in the effort to secure contraction; this once attained, secured the woman against hæmorrhage. He never uses ergot during the second stage of labor, and in the third stage only when the placenta was in the act of being detached, or when inertia was present. Hæmorrhage had occurred very infrequently in his practice.

Concerning the use of disinfecting injections, the speaker found the practice objectionable, during the first twelve hours. Fresh wounds are capable of absorbing septic matter. After a time, wounds become glazed over and non-absorbing. There is danger of freshening these surfaces by the use of injections.

DR. DUDLEY thought it justifiable practice to inject the uterus itself with hot water in every case. It removed clots and tended to diminish after-pains. Hot water is especially useful in post partum hæmorrhage. On the other hand, he considered the use of Munsell's salt injudicious, and iodine much preferable, as being as efficient as a hæmostatic and safer. He mentioned an

epidemic of puerperal fever occurring in Bellevue Hospital, when Dr. Perry demonstrated the great usefulness of injecting the uterus with hot carbolized water when there was a tendency to hæmorrhage, and a warm, carbolic injection repeated every four hours subsequently, to protect the canal from absorption of septic matter. The temperature was always greatly reduced by these injections.

Dr. FITCH thought that milk fever was due to mammary congestion, and that a free evacuation of the bowels was a neglected but excellent remedy. In the management of the third stage of labor, he exercised pressure freely, in a direction upward rather than downward, upon the body of the uterus. He also agitated the uterus to stimulate it to contraction; he also made traction upon the cord, in the proper axis, for the same purpose. He usually inquired into the history of the previous labor of the patient, and governed himself accordingly. After labor he believed rest essential, and did not allow the clothing to be disturbed. He rarely introduced his hand into the uterus, and had never seen a case of so-called adherent placenta. He did not wash out the uterus or vagina, and had once known severe shock, fever and metritis to follow such injections.

DR. SAWYER alluded to the importance of what might be termed the fourth stage of labor, and spoke of Dewee's success in protecting the woman from after-pains by allowing the uterus to rest after delivery.

The speaker believed that the almost inevitable clot might be prevented by allowing the uterus time to recover itself after delivery; by this means, the final tonic contraction occurs earlier and more strongly. After the lapse of 48 hours, he used vaginal irrigations of chlorinated soda.

DR. NELSON never left the uterus till the placenta was expelled, and made frequent examination for an hour after labor. He did not meddle unless dealing with a dilated womb or hæmorrhage; then he introduced the hand and made compression. He gave ergot in abnormal cases, combining its use with quinine for some hours, or even days. He had known this course to prevent after-pains.

DR. JONES thought the views expressed were clear, succinct

and eminently proper for the guidance of the accoucheur. He believed the normal state of the uterus just evacuated to be one of a more or less tonic contraction, which, by becoming complete, closed up the uterine sinuses. His plan of management of the third stage was influenced by the view. He never removed his hand from the uterine globe after the child was detached until the contraction was secured and became lasting. If the uterus was not plainly felt, he kneaded the organ until reaction was established, thus using pressure or agitation only when the organ was delinquent. In this manner he kept aware of the condition for at least an hour. He never gave ergot till after the birth of the child, and then with circumspection.

DR. MILLER concluded the discussion by enlarging upon the views expressed in the paper.

ARTICLE IX.

THE BRAINARD DISTRICT MEDICAL SOCIETY.

The Brainard District Medical Society met April 24. Present: Drs. J. W. Newcomer, H. B. Brown, M. Hurst, S. T. Hurst, J. D. Whitley, W. S. Watson, Chas. B. Maclay, A. I. Maclay, P. L. Dieffenbacher, W. P. Walker, I. N. Ellsberry, J. P. Walker, O. P. Crane, J. A. Walker, J. W. Spear and A. M. Bird.

The following new members were elected: Drs. Chas. B. Maclay and A. I. Maclay, of Delavan; Dr. J. W. Downey, of Topeka; and Dr. W. P. Walker, of Walker's Grove.

Officers elected for the ensuing year as follows: President, Dr. J. W. Newcomer; Vice Presidents, Drs. J. D. Whitley, I. N. Ellsberry and H. B. Brown; Secretary, Dr. J. A. Walker; Treasurer, Dr. A. M. Bird.

The retiring President, Dr. J. P. Walker, read his valedictory address, on the advancement made by the profession within the quartery century—after which the subject of puerperal fever was fully discussed, several valuable papers being read.

The President appointed as delegates to the State Medical

Society, to meet May 20, at Lincoln, Drs. H. B. Brown, W. S. Watson, J. A. Walker A. M. Bird, C. B. Maclay, S. T. Hurst and W. P. Walker; and as alternates, Drs. J. P. Walker, O. P. Crane, J. W. Spear, A. I. Maclay, I. N. Ellsberry, C. E. Elliot and G. H. Sanford. And as delegates to the American Medical Association, to meet at Atlanta, Ga., May 6, Drs. M. Hurst, L. L. Leeds and J. D. Whitley.

Adjourned to meet in Petersburg, July 24, 1879.

J. A. WALKER, *Secretary.*

ARTICLE X.

STATE MICROSCOPICAL SOCIETY.

At the annual meeting of the State Microscopical Society, held at the Academy of Sciences, 263 Wabash Av., April 25th, the following officers were elected for the coming year:

President, H. A. Johnson, M.D.; Vice President, Prof. H. H. Babcock; Vice President, Lester Curtis, M.D.; Treasurer, W. H. Summers; Recording Secretary, Ernest Stuart; Corresponding Secretary, Wm. T. Belfield, M.D.; Trustees, H. W. Fuller, Prof. E. S. Bastin, Jas. Colgrove, B. W. Thomas and H. F. Atwood.

The following is an abstract of a paper on "Tactile Hairs" read before the State Microscopical Society:

THE TACTILE HAIRS COMMONLY CALLED WHISKERS, OF CERTAIN ANIMALS.

By DR. LESTER CURTIS, of Chicago.

The growth of an ordinary hair takes place by the multiplication of the cells which surround the papilla and the follicle possesses no muscles of volition or special arrangement of nerve fibers.

The first noticable peculiarity of the tactile hair, as in the snout of a mouse, is the great size of the follicle, several times that of an ordinary hair follicle; this follicle has a bulging about

one-third of the distance from the top which corresponds with a remarkable enlargement within.

Two-thirds of the lower portion of the follicle is surrounded by striated muscular fibers which appear to arise from the side of the follicle by a short tendon. They encircle the follicle and then pass off to a considerable distance to become lost in the muscular fibers of the lip. These muscles are furnished with a rich plexus of unusually large capillaries. Other muscles are attached to the hair in a manner somewhat similar to the ordinary erectors of the hair, but are more abundant and of the striated variety.

Within the follicle and outside the root sheath of the hair is close plexus of very fine capillaries which send branches over the enlargement mentioned above and form a peculiar ring-like plexus above it. Between the branches of this ring-like plexus there is but little tissue; but in the mouse and cat, at least, it does not form a sinus as is claimed by some.

The enlargement surrounds the hair eccentrically and consists of two parts, the outer of which when the follicle is divided longitudinally through the center of the hair, is nearly circular in outline and is attached to the inner part by a short, thick pedicle. It is interspersed with oblong nuclei. The inner part is not so wide but is longer and surrounds the root-sheath like a band.

The speaker considered these last organs to be of a nature similar to the terminal organs of nerves found in other portions of the body but was not prepared at present to demonstrate his position.

The paper closed with a brief biblography of the subject, after which numerous slides were shown in illustration of his descriptions of these organs.

ARTICLE XI.

MICHIGAN STATE BOARD OF HEALTH. The regular meeting of the State Board of Health was held in Lansing, on Tuesday, April 8, 1879. The following members were present: Dr. R. C. Kedzie, Hon. LeRoy Parker, Rev. D. C. Jacobes, Dr. H. O. Hitchcock, and Secretary Henry B. Baker.

President Kedzie stated that on account of ill health and busi-

ness connected with oil matters, he had been unable to prepare his annual address. By a vote of the board, he was requested, if convenient, to make his annual address on the subject of the history of legislation relative to illuminating oils in the State of Michigan. The motion also included a request to have in condensed form the main facts bearing upon the dangers in the use of kerosene oil.

Dr. Kedzie was unanimously re-elected president of the board for the ensuing two years.

SLAUGHTER-HOUSES.

Dr. Kedzie presented the subject of slaughter-houses in towns and rural districts, and read a letter from F. Andrews of Dowagiac, relative to slaughter-houses in his vicinity. Dr. Kedzie referred to the rules which he had prepared for the government of slaughter-houses in the township of Lansing, and suggested the desirability of butchers uniting in one house in cities of even the size of Lansing, for greater ease of methods, for cleanliness and sanitary arrangement. Referred to a committee for investigation and report. This committee is also expected to prepare a model set of rules for the regulation of slaughter-houses.

DEATH OF REV. MR. BRIGHAM.

The secretary announced the death of Rev. C. H. Brigham, a former member of the board, and proper resolutions of respect to his memory were passed.

NEW LEGISLATION.

The secretary also announced the passage by the present legislature of three new laws, which will tend to promote the public health in this State and increase the efficiency of local boards of health. Of these laws, one provides that the council of each city and village shall be a board of health, unless there is other provision by special law; so that hereafter there is to be a local board of health in every township, village and city in the State; one law makes it the duty of health officers of cities and villages to notify the prosecuting attorney of any neglect by householders or physicians to report cases of disease dangerous to the public

health; and one authorizes boards of health in cities, villages and townships to furnish free vaccination to the inhabitants thereof. The secretary is to prepare a circular to health officers in cities, townships and villages, calling attention to some of their duties under the new laws, and otherwise setting forth their duties as health officers.

The board adopted a resolution tendering a hearty vote of thanks to Congressman McGowan for his labors in procuring the passage of the bill which has recently become a law, establishing a national board of health.

COMMUNICATIONS WERE RECEIVED

from Hon. C. D. Randall, of Coldwater, suggesting the propriety of the selection of healthy locations and the determining of plans and specifications for all new State institutions, by the board of health, and that all systems of drainage, sewerage, etc., in public buildings hereafter to be erected, should be approved by the State Board of Health previous to their adoption.

Also, from J. A. Russell, M.D., of Edinburgh, Scotland, setting forth a plan for a mutual sanitary protective association for cities, accompanied with a leaflet, giving the plan adopted in that city.

Also, from the national educational bureau at Washington, inclosing a communication from Wm. M. Evarts, Secretary of State, giving notice of a prize of £100 offered by the Royal College of Physicians of London for the best essay on hydrophobia, its nature, prevention and treatment.

Also, a communication from B. B. Ross, of East Saginaw, suggesting that health officers ought to visit all cases reported as dangerous to the public health and verify the diagnosis of the attending physician. He thought this would improve the accuracy of the weekly reports of diseases by health officers. The communication was referred to the committee on legislation, as was also a suggestion by Dr. Baker that the health officer should be authorized to act promptly for the restriction of such diseases, if found to be correctiy reported. Another communication, on the same subject, received from E. S. Richardson, M.D., was referred to the same committee.

At the afternoon session Dr. Lyster was present, and presented

an article, portions of which he read, relative to the reclamation of

OVERFLOWED OR SATURATED LANDS.

Reference was made to large tracts of land on the Crapo farm, the Chandler farm, and near Detroit, and descriptions given of the methods adopted and their results. It also included a record of experiments made for the past twenty years in a large tract of country near Bordeaux, France, translated from a French report. This paper showed the great importance of the work, both pecuniarily and as directly related to health. The original French paper was illustrated with a diagram, showing the relations of the birth-rate to the death-rate as connected with this process of reclamation. It showed an increase of the birth-rate over the mortality until the Franco-Prussian war.

In the discussion which followed, Dr. Kedzie referred to a paper by Judge Albert Miller, of Bay City, on the same subject, giving his experience in the Saginaw valley, where he is reclaiming a section of very valuable land by protecting it with dykes, pumping the water out with steam pumps, and then keeping down the leakage by means of wind-mills. He received the thanks of the board for his paper, and was requested to extend his investigations far enough to include the inspection of overflowed lands in Gratiot county and some other portions of the State, and report upon them, together with recommendations as to what ought to be done.

Dr. Lyster also reported having prepared by request of the board the draft of a plan for a circular on the subject of

HOUSE-DRAINS AND PUBLIC SEWERS.

The circular is to be studied and elaborated by each member of the board before it is printed and sent out.

Dr. Kedzie said he wished to give an additional point to be considered in testing tin utensils for the presence of lead. His method heretofore published, as thus modified, would be to moisten the tin with nitric acid over a space the size of a dime, dry thoroughly, place thereon a drop of water and then a drop of iodide of potassium. If the tin is adulterated with lead, the spot will assume a yellow color.

In reply to a question as to the

DEATH RATE IN THIS STATE,

whether increasing or decreasing under the enlarged sanitary work done in the past, Dr. Baker said it was difficult to speak as regards the whole State, but he brought forward a statement received from Dr. W. H. Rouse, a correspondent in Detroit, giving the total interments in that city since 1873, whereby it appears that while the number of inhabitants has been constantly increasing, the number of interments has been constantly decreasing. The figures given were as follows: Interments in 1873, 2,506; in 1874, 2,386; in 1875, 2,321; in 1876, 2,317; in 1877, 2,105; in 1878, 1,909. He gives for the years 1876–7–8 the number of deaths from each cause, whereby it appears that the decrease has been in certain preventable diseases, rather tending to show that the sanitary work at Detroit in perfecting the water supply and otherwise has resulted in lessening the death rate. In one instance it is almost certain that the lessening of deaths has come from vaccination. In 1877 there were 107 deaths from small pox, and vigorous efforts were made for a thorough vaccination throughout the city. In 1878 not a single death was reported from this cause.

NEW LEGISLATION.

Hon. LeRoy Parker, from the committee on legislation, reported having prepared various bills which had been brought before the legislature, three of which had become laws. One relative to an improved system of holding coroners' inquests, and another in which he had acted with the secretary of the board, in reference to an improved method of collecting vital statistics, is now before the legislature. The memorial for

A SANITARY SURVEY

Had been delayed, owing to lack of time and difficulty of getting the matter properly before the legislature. Mr. Parker and Dr. Baker recommended that the details of a plan be worked out in the board before presenting it two years hence for legislative action; and that there be a committee on sanitary survey, charged

with the preparation of schedules for such survey, to which committee all papers or suggestions relating to the subject shall be referred. A committee of three was appointed.

This was the meeting for the reorganization of committees; but as there are vacancies in the board the subject was postponed until the July meeting, A large portion of the work of the board is assigned to committees, and as communications come to the secretary they are forwarded to the proper committees for action. During the quarter, communications had been received and referred to committees, as follows: To Homer O. Hitchcock, M.D., 1, a postal from W. W. Switzer, M.D., relative to three cases of typhoid fever caused by use of bad water; 2, a letter from J. P. Gray, relative to sawdust and mill refuse in streams; 3, a letter from J. D. Johnson, sending a petition against allowing sawdust, etc., to flow into the lake; 4, a letter from C. W. Marvin, M.D., being a study of an outbreak of diphtheria in Gratiot county. To Henry F. Lyster, M.D., 1, a letter from Josiah Miller, relative to flooding Chippewa river for driving logs; 2, a letter from Daniel F. Swain, of Hungerford, relative to cutting away a dam; 3, a letter from W. F. Jenison, of Eagle, relative to drainage, etc.; 4, a letter from J. VanZandt, relative to the dam on Lincoln's Lake.

The secretary, having made some experiments and had some correspondence on the subject of illuminating oils, was requested to turn over to Dr. Kedzie, if he desired it, all correspondence in relation to that subject.

EXAMINATIONS IN SANITARY SCIENCE.

Dr. Lyster made a report on the proposition, originally made by him, that the board shall offer to examine candidates in sanitary science and its different branches, recommending that the board make preparations for examinations by its different committees on subjects assigned to them, and that certificates be given to those who ask for and sustain examinations. It was thought that the publication of the examination papers would tend to increase the interest and knowledge concerning the subject among the people generally; and that the examinations would tend to secure throughout the State a class of physicians especially intel-

ligent on the subject of sanitary science, and the public could have proof of their qualifications by means of these certificates. If the people see fit to select such persons for health officers, it would react well on the interest of public health, which it is the duty of the board to promote.

Dr. Baker favored it, and suggested that schedules of questions in each of the several branches of sanitary science be prepared for this purpose. The secretary was directed to procure copies of the examination papers in sanitary science from different colleges in foreign countries.

SANITARY CONVENTIONS.

A communication was received from Dr. Peters, of Tecumseh, inviting the board to hold a convention at that place. The board voted to hold two public sanitary conventions next winter, and each member pledged himself to make them a success. It is desired to procure at these meetings the greatest collection of sanitary utensils which can be obtained, from a common pie-dish to the most elaborate apparatus for heating and ventilation. The time and place for holding such conventions will be announced as soon as determined; and it is hoped that dealers in sanitary appliances will exhibit their wares, and describe their uses and advantages.

Drs. Hitchcock, Lyster and Baker were appointed a committee to prepare for the details of these sanitary conventions.

The secretary presented a report of work done in the office during the quarter. It included the distribution of over 1,000 copies of the Sixth Annual Report, the printing, addressing and mailing of about 2,500 blanks for return of annual reports of health officers and clerks of local boards of health, a large number of which had been received, examined and filed. Circular 29, relative to diseases in Michigan in 1878, had been sent to each correspondent, and replies from 26 persons had been received, examined and filed. Meteorological observations had been taken at the office during the quarter. Meteorological registers and reports of diseases had been received from observers, to whom also the regular distribution of blanks had been made. Work had been done in compiling the weekly reports of diseases, and

the meteorological data, for 1878. The correspondence and routine work of the office had been fully up to the average.

The subject of

ANNUAL REPORTS OF HEALTH OFFICERS

and clerks of local boards of health was discussed. It is found difficult to compile these reports in a satisfactory manner by counties, because in many cases one or more townships are not represented by reports. Some officers fail to report, because no reports are made to them; though one effort of the State board is to learn just such facts as the probable extent of delinquencies in the reports of physicians and householders.

The next regular meeting of the board will be held July 8.

NERVE STRETCHING.—(*Journ. de Méd.*, Jan., 1879, p. 41.)—Blum practiced this operation in a case of paralysis of the median and radial. A man who a month before had received a cut on the fore-arm, entered the hospital with weakness of arm and pain. Blum exposed the median and radial nerves, elevated them slightly. The next day the muscles began to contract, and the derangements of sensibility had partly disappeared; soon after the patient was completely cured. Duplay reported another case where the troubles of motility and sensibility were due to a tumor situated along the course of the cubital nerve. The diagnosis was neuroma of this nerve, but when operated upon, the tumor was found to be on the tendon of the anterior cubital muscle, and only acted on the nerve by the irritation of its vicinity. The nerve was stretched slightly. The movements returned very rapidly.

THERE will be a meeting of the Illinois State Board of Health, for the transaction of public business, and examination of candidates under the Medical Practice Act, at the Grand Pacific Hotel, Chicago, Thursday, June 12th, 1879, beginning at 8 p.m.

A. L. CLARK, Secretary.

Translations.

ARTICLE XII.

PROFESSOR LEFORT ON THE ANTISEPTIC TREATMENT OF WOUNDS. Translated by Henry M. Lyman, M.D.

The following abstract of an address by the distinguished Professor of Operative Surgery in the Paris School of Medicine, delivered before the Surgical Society of Paris, is published in *Le Progrès Médical*, March 22, 1879. It will be read with interest by those who, during the past ten years, have followed the course of events in the domain of surgical practice without suffering the unquestionably brilliant results of the new methods to blind their eyes against the fallacy of certain theories which have been urged in explanation. The experiments of M. Pasteur, which are here noticed, are of a character to which allusion is hardly ever made by that greatly over-rated gentleman.

"Two theories are now before us. The first, which has been advanced by Mr. Lister, and which can be called the *theory of externality*, affirms that a wound becomes poisoned through contact with the air. It is therfore necessary that poisonous air should be excluded from the wound, and the mode of dressing devised for this purpose has been described as the antiseptic method. M. Lucas Championnière has gone further than Mr. Lister, and has spoken of *antiseptic surgery*.

"The second theory advances the hypothesis that wounds secrete a special virus, called sepsin by certain authors; that this virus may be absorbed, and may thus produce more or less serious accidents. I cannot wholly accept either of these theories; I am confident that in certain cases, under the influence of certain dia-

thetic causes, constitutional conditions or bad hygiene, a wound may produce this poison, but that it will not occur in wounds treated under favorable circumstances. I also believe that in certain forms of so-called septicæmia — that indefinite general expression in which are merged so many differing conditions — contact with the air may be injurious. I think we may thus explain some of the phenomena of hectic fever. Clinically the fact seems to be demonstrated, and we know what precautions the surgeon adopts to prevent the entrance of air into a chronic cold abscess. But the general doctrine of M. Pasteur does not seem to me acceptable; it can be summarized in the following words: No germs, no suppuration. It is the germs, according to the theory, which produce the accidents; but, if so, since these germs are equally dispersed everywhere, why is the air of the hospital more noxious than that of the city? Why is the air of the city worse than that of the country? The wound is the same; if the air is the same, why should not accidents everywhere occur? I am very well aware that lately mention has been made of particular microbions. Davaine and Pasteur with remarkable adroitness and sagacity, have demonstrated that anthrax is due to a special proto-organism, and they have attempted to extend this theory to all infectious diseases. But the results have been negative. One of our professional masters has invited M. Pasteur into his hospital service, has placed under his charge two patients, of whom one was a victim of traumatic septicæmia, the other of purulent infection. M. Pasteur has made numerous investigations, but in neither case, either by direct examination or by cultivation, could he find bacteria.

"Besides, gentlemen, if we accept the theory of M. Pasteur, how shall we explain the success which attends the open method of of dressing? Roser, who succeeded Billroth at the Zurich hospital, has authorized the method of dressing without dressings; he places his stumps on cushions, without closing them, without protection of any sort, and his results have been better than those of Billroth, who practiced the method of close dressing. Wishing to have a clear idea regarding the dressing which the society of Moscow has recomended as the best, I employed it in a very serious case, a mechanic whose leg and thigh had been crushed

by a locomotive. After making a double amputation, I employed the open dressing and achieved a very fortunate result. I do not believe in the germ theory.

"I know very well that a false theory may yet be associated with good practice, and I hasten to state that Lister's dressing is an excellent dressing, and that it has given me splendid results. I, however, do not believe that the success which we now enjoy can be wholly explained by the new method. We pay greater attention to hygiene than when, in 1855, I laid before the Surgical Society the first international statistics, and we were distressed to learn that the mortality in our hospitals was greater than the hospital mortality in London. We have remedied the difficulties to which I then called attention; our patients are better fed, and that simple fact has something to do with the improvement of our results. But people still die, and they will die in spite of Lister's own dressing. I see that his mortality in amputation of the thigh is 26 per cent. My own statistics are better than that, only 20 per cent. for the same operation, three deaths in fifteen amputations. And I could tell you that one of these patients died of exhaustion at the end of forty-six days; that a second, amputated by one of our internes, and cured, had a conical stump, for which I resected the end of the bone, and that for some unknown reason he died suddenly during the day of the operation; that the third patient died within an hour after the amputation, without rallying from the traumatic shock. I will not dwell upon these statistics, for you can find them fully related in the *Bulletin of the Academy of Medicine.*

"I have experimented with Lister's dressing, and have had magnificent success. In my opinion, it is the method which best and most quickly produces immediate union. I ascribe this fact to the causticity of carbolized solutions. For carbolic acid I have substituted alcohol and sulphate of zinc, and I have obtained exactly the same prompt recovery and immediate union as with Lister's dressing; the proof, therefore, seems clear to my mind. The action of these caustic substances, the immobility and compression of the stump, the deep union of the flaps, are the elements which in my opinion constitute a good surgical dressing. * * * I believe that a wound in good condition does not pro-

duce a septic matter which can poison the system; but I do believe that under the influence of certain conditions of defective alimentation, of constitutional diathesis, or of moral depression, a wound may produce such a poison, which may be transported by the air, and especially by the hands, by the dressing apparatus, the linen, the sponges, or the topical applications, and may thus infect other patients."

ALCOHOL AS AN ANTIDOTE FOR STRYCHNIA.—(M. Hameau, *Gaz. Méd. de Bordeaux and Journ. de Méd.*, Jan., 1879, p. 27.)

The author reports certain experiments undertaken to learn the action of subcutaneous injections of alcohol in case of strychnine poisoning. A rabbit poisoned in this manner, and in a state of apparent death for five minutes, was injected with a gram of alcohol of 90°; in less than three minutes the members were extended, and were no longer convulsed when irritated. In twenty-five minutes the animal was on its feet, had no convulsions spontaneous or provoked, and ate. The next day it was in perfect health. The same experiment renewed several times, gave the same result, while rabbits poisoned with strychnine and left to themselves, never recovered.

On the other hand, the same quantity of alcohol in a rabbit not poisoned, plunged the animal into a state of stupor, and caused death the next day.

The efficacy of alcohol injections in case of strychnine poisoning, would appear to be sufficiently demonstrated by these experiments. It remains to be shown, whether alcohol may be considered as an antidote to the poison itself, or as a powerful sedative of which the action upon the cerebro-spinal system is diametrically opposed to the action of the strychnine, and would be useful when there was a nervous erethism to combat, under whatever form it presented itself. This last opinion appears the most probable. The author thinks alcohol thus used may be of use in poisoning by strychnia; it might also in tetanus if one dared employ it in sufficient doses by the endermic method. However, in the only case in which the remedy was used, it failed, but the case was already *in extremis*.

Selections.

ARTICLE XIII.

REPORT ON HISTOLOGY AND MICROSCOPY. By DR. G. F. WATERS.

By reference to the Transactions of the American Dental Association for 1877, page 43, discussion of Dr. Dean's paper on Dental Physiology, it will be seen that I referred to some strange appearances found within a cavity (in a section) of a tooth. Fig. 1 of the accompanying plate gives a view of this portion of the section enlarged forty diameters, and having some portion of the contents idealized at eighty diameters. This cavity was in the enamel, in the grinding surface of the palatal portion of the crown of the first left superior molar, and opened from a sulcus into which small particles of food, during mastication, were forced; subsequent fermentation would displace some of the impacted mass only to be replaced again at the next meal. This series of operations had continued for forty years, when the tooth was extracted, so that the penetration of the enamel and formation of the cavity were very gradual.

As we look into this cavity we desire to know what and from whence are these curious bodies. In pursuing an investigation for the purpose of elucidating these questions, we naturally first look to the various kinds of food that have been ground upon the tooth, and in them we find forms that very nearly, if not exactly, correspond with those found in this cavity of decay; and we shall be surprised at the vast number and variety of the minute cryptogamous forms of life to be met with in all articles of food, particularly the fruits, nuts and roots. In the sweet potato I find forms developing before decay, resembling B (which is an

enlargement of one of the forms found in the cavity in Fig. 1). They are dark but covered with spines more or less permeable by light, and having a length as to width of six or more to one. They appear before the mycelium of a well-known pencillium, and resemble in it no respect, and I trace no connection between the two, except that the spiny form seems always to precede the mycelium of this pencillium.

This mycelium is hyaline, smooth, of indefinite length, with many fine branches, and seldom exceeds the tenth of a millimeter in size. In growing, their course is between the cell-walls of the starch-grains, thus causing an old wilted potato to stiffen up and appear quite fresh. As they progress, sporidia-bearing filaments penetrate the starch-cells, changing their contents to carbonic acid, water and sporidia. Then, by the rupturing of the starch-cells, the potato suddenly becomes soft and is soon covered by white spore-bearing filaments, in which condition it presents the apperance of the body found in the sulcus in Fig. 1, marked A, enormously magnified, an enlarged view of which is given in the white square on the enamel. It will be seen that the potato may be considered good food, whilst largely composed of fungoid forms, mycelium and sporidia. When the potato is cooked — more especially when baked — the part infested by the fungi will be found harder and darker than the other parts, and also to give off a peculiarly disagreeable odor. Heat, sufficient to cook the potato, seems to destroy the vitality of the fungi, so that when thus eaten, they do not seem to disturb the digestion.

What I have said of these forms of fungi in the apparently healthy potato, M. C. Cook, in his "Rust, Smut, Mildew and Mould," has said of many other articles of food which I have been in the habit of eating (as the sweet potato) uncooked. Apples, pears, and peaches have — in addition to form alluded to above which grow within — other forms growing upon their surface, allied to lichens. In the beet, turnip and onion, whilst in an anticarious condition, fungoid forms were discovered resembling some of those found in this cavity, but which are not here illustrated. The castana or Brazil nut showed a large variety of fungi. In one of these, microscopic truffles, or bodies resembling the truffle, were found packed solidly throughout the entire mass.

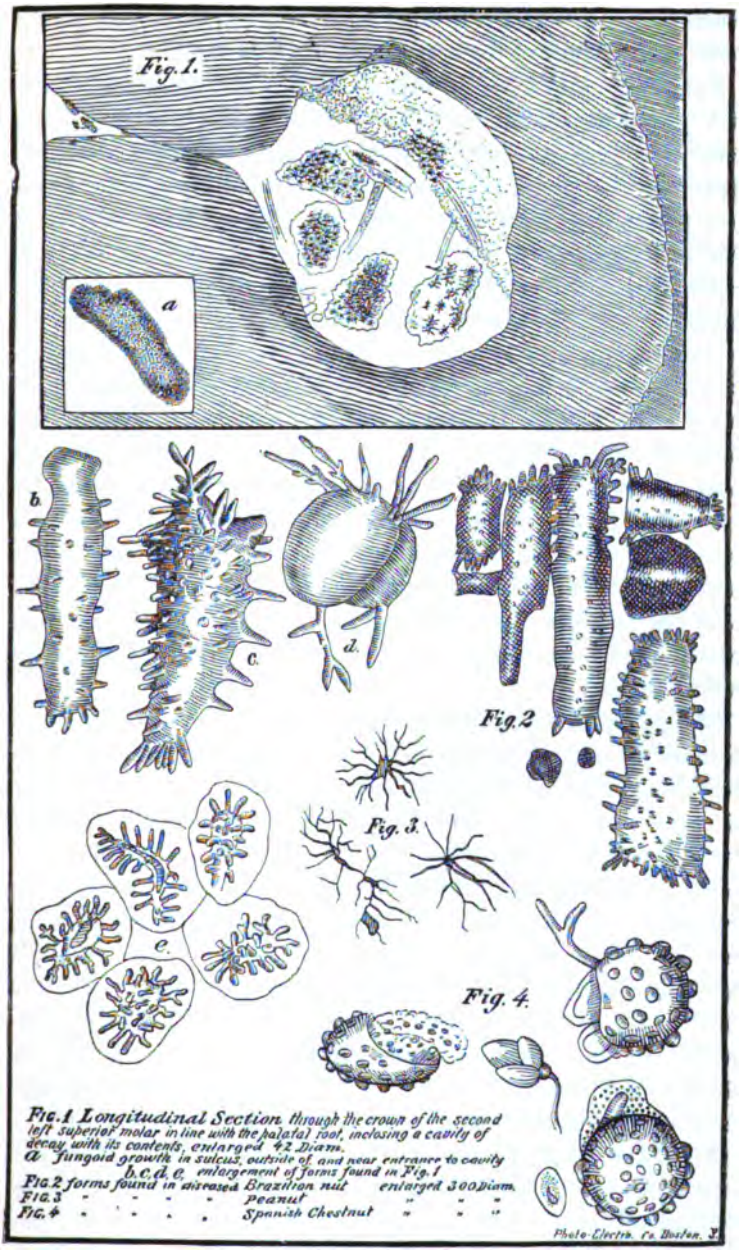

FIG. 1 *Longitudinal Section through the crown of the second left superior molar in line with the palatal root, inclosing a cavity of decay with its contents, enlarged 42 Diam.*
a fungoid growth in sulcus, outside of and near entrance to cavity
b.c.d.e. enlargement of forms found in Fig. 1
FIG. 2 *forms found in diseased Brazilian nut enlarged 300 Diam.*
FIG. 3 " " " *Peanut* " " "
FIG. 4 " " " " *Spanish Chestnut* " " "

When placed in water, a hyaline mycelium was developed, giving them when magnified the appearance of D, in the plate.

Fungi were also found in this nut having red mycelium, others with yellow mycelium, and others still with white mycelium. Some nuts were examined in which the meat had been changed, apparently by fungi, to palmic acid. Other crystalline forms were present that gave under polarized light a varied and most beautiful appearance, such as feathers, fleecy clouds, tropical palms, and the frost-work upon the window-panes — all most brilliantly rainbow-tinted. One portion of this nut, mounted for the microscope, gave, when magnified three hundred diameters, the forms seen in Fig. 2, which are not unlike in appearance B and C — the latter being enlargements of forms observed in the cavity of decay in Fig. 1. The mites which invested many of these nuts were destroyed in large numbers, at a tender age, by a red spore fungus which had a yellow mycelium. I found red sporidia of this fungus both in eggs, and young mites in the sacculated stage. The adult mites seemed free from them. The full-sized sporidia were as large as human blood-disks, and seemed filled with minute spores not more than the fifteenth of their diameter.

The pecan nuts examined had, with but few exceptions — and in these the meat was bitter — the mesocarp packed solid with the spores of a red fungus containing a very large percentage of tannic acid. From less than a pint of the shells I obtained over two ounces of tannic acid of a bright ruby color. The mycelium of this fungus in its development in an open vessel, when kept at a temperature of 98° Fahrenheit, gave off fumes of acetic acid, and upon the addition of a amall amount of aqua-ammonia the fumes were rendered exceedingly pungent, resembling those of nitric acid. In some of these nuts the red fungus was absent, but another was present with forms exactly like those in Fig. 3, which were found in the peanut. All the same forms were also found in the little red checkerberry, *Gaultheria procumbens*.

All of the single forms invested by fungi had this ray-like appearance. The English filbert exhibited three forms of fungi growing within it — one constantly present growing within the substance of the cotyledons, the mycelium of which was so minute

as not to be traceable in a microscopic section, but when sown in a tumbler of water it developed with great rapidity and formed a net-work throughout, giving it an opalescent appearance. In a short time a dense film formed upon the surface, which gave off a highly offensive odor. It was whilst experimenting with this fungus that I was six times prostrated by typhoid fever, or a fever resembling typhoid, which yielded quite readily at first to an aborative treatment, consisting of an internal exhibition of bisulphite of soda and carbolic acid combined. Subsequent effects, however, compelled me to give up the further study of this fungus.

The other fungi developing between the pericarp of the cotyledons merit a passing notice. One of them resembles minute cocoons of a lepidopterous insect, being minute globes composed of yellow mycelium and containing within red spores. The other showed red mycelium with long club-shaped spore heads with spores growing in sulci upon it. All the spores in this nut were very much smaller than those found in the Brazil or the pecan nut. The forms illustrated on the plate at Fig. 4 were found in the Spanish chestnut, and exhibit the minuteness of the spores, and also show their gradual development as well as the commencement of the growth of mycelium. One body, centrally situated, shows the development of spores by gemmation. Other forms show the development of spores by septation. The spores in two cases are seen escaping from the sporidia.

M. C. Cook, in his account of the British fungi, says that the cryptogamous, unlike the phanerogamous plants, give off carbonic acid and absorb oxygen. We generally recognize such to be the case with some of the ferments, while others give off acetic acid, as was the case with the fungus found in the pecan nut, and as also is the case with the "mother" which grows upon the surface of cider when exposed to the air. There are facts which seem to show *that the only limit to the acid products of these bodies — the fnngi — is the constitution and condition of the substance in which they find lodgment and are capable of developing.* The vast number of these bodies may be inferred when it is known that mycologists at the present time, with a liberal allowance for hair-splitting, reckon among British species of flow-

ering plants only one-fourth of the number of the fungi alone, not to mention ferns, mosses, algæ, and lichens. There are strong reasons for believing that carbonic oxide is also developed by some of these low forms of vegetable life. Would it not be proper to call them vegetable deaths? It is not clear to my mind that any of these, if left, would multiply for any length of time at the expense of the tooth, but it is perfectly clear that many of them have been introduced with particles of food, where by their presence they have exerted an injurious effect upon the tooth substance, in that they have acted to decompose the food with which they were associated, if not also to decompose portions of the tooth.

It is well known that in all fermentable substances, fermentation is started by the presence of an azotized body; that the fermentable substance changes and has formed within it, as a result of this fermentation, some acid; that fermentative changes take place with varying rapidity, according to the more or less favorable conditions of temperature and moisture; that the buccal cavity is, in a normal condition, most highly favorable to such changes; that all foods are more or less infested by some form of fungus; that the air is, to a great extent, at the sea-level, and over most of the earth's surface, so impregnated with cryptogamous spores (and all cryptogamous spores are nitrogenous) that foods can only be kept from fermentation for any length of time by destroying the azotized bodies with which they are in contact by the application of a temperature sufficiently high to destroy all such life, or by combining with them certain chemical agents. It is also well known that all foods not so protected against contact with azotized bodies will, in the presence of sufficient warmth and moisture, be liable to destructive fermentation. Hence it may be seen that wherever there are imperfections in teeth, or places where a lodgment of food or fermentable matter may occur, there will be a liability to the formation of acids, and of course to the solution of lime-salts in the contiguous portion of the tooth. So that all imperfections that cannot be so filled as to perfectly secure them from further lodgments should be so shaped as to readily be kept clean by friction. Teeth with soft enamel will naturally be the most difficult to preserve by filling,

as in such teeth the crystals of enamel are more loosely put together, the spaces between them more easily penetrated by foreign substances; and a greater difficulty will be found in coapting the filling, of whatever nature, to the surfaces of such teeth than to the surfaces of the more dense and perfect. And it will be understood that the softer and more pliable the filling material, the more readily will it pass into the inequalities of the surface, and hence more perfectly protect it. But it happens, most unfortunately, that of the substances used for such filling purposes, the one most stable is the most difficult to adapt perfectly to the minute inequalities of the walls of a cavity.

With these facts in view, it is not necessary to consider gold as "incompatible with tooth-substance," in order to account for the failures which in certain cases have been attributed to it. But this difficulty attending the adaptation of gold to the walls of the cavity is easily overcome, for nature has not left us without a fitting substance to fill these minute scratches and imperfections of soft teeth, to the entire exclusion of the minute spores we have had under discussion. This substance will no more sustain the life of a fungoid spore than will carbonic monoxyde the life of a human being. It is pliant, inodorous, tasteless, non-oxydizable, non-volatile, non-irritant even to the pulps of teeth, by which it is readily absorbed, inducing in them the highest functional activity compatible with comfort to the individual. The substance is vaseline.* With the aid of vaseline the dentist will now be enabled to save the soft teeth as readily with gold as he formerly did those of denser structure.

My method of using this material is as follows:

After having prepared the cavity for filling by the removal of débris and carious walls, and by properly shaping it, I destroy the lower forms of life in the walls of the cavity, so far as I am able, by the use of a saturated aqueous solution of carbolic acid and a saturated aqueous solution of bisulphite of soda, singly or combined. I then dry the cavity with bibulous paper, and with a small wad of the same rub into its surface the vaseline, leaving a

* Vaseline is one of the products obtained from petroleum by repeated filtration through boneblack, according to a process patented by Robert A. Cheesebrough, and furnished by him to the profession, without a royalty.

super-abundance in the cavity until I am ready to fill. I then wipe the cavity clean, just as the steel and copper-plate printers do the face of the plate when about to print from it. And just as the ink is retained in the lines and scratches of his plate, so will the vaseline be in the porous enamel and scratches in the dentine, to the exclusion of other foreign matter.

ALTERATIONS OF THE SYMPATHETIC IN A CASE OF PERNICIOUS ANÆMIA. Brigidi. (*Lo Sperimentale, V*, '78.)

Since Birmer's discovery of certain changes in the tissues the attention of other pathologists has been directed to the origin of this anæmia. A domestic aged 53, died of a slowly developed, progressive, pernicious anæmia; post mortem section revealed an enormous deposit of fat in the panniculus adiposus, but no further changes in the heart or other viscera.

But the cardiac plexus in the fresh state showed an enormous granular proliferation, so that at many points the nerve cells were compressed; at others they were pigmented; the blood vessels were empty. In the ganglion hardened by alcohol, nerve cells were found scatteringly, their places being occupied by groups of small elements which appeared like nucleoli. These appearances led the writer to explain the pathological processes thus: The endothelium lining the capsule of the ganglion gradually enlarges, compressing the nerve cells and forming more and more granulations, a few of which take on a bronzed color whilst others undergo a fatty degeneration. At last both nerve cells and fibers succumb. The empty blood vessels of the ganglion also present an unusual proliferation of endothelium. In the immediate vicinity of the ganglion a large quantity of connective tissue, poorly supplied with nerves, is found. Inasmuch as this ganglion influences the blood supply of the chylopoëtic apparatus, digestion and assimilation are poorly performed, respiration diminishes in frequency, oxidation of blood is retarded, the fatty elements of the blood increase, fat is deposited, and the processes run in a vicious circle. (*Cin. Lancet and Clinic, Jan.* '79.)

Foreign Correspondence.

ARTICLE XIV.

LONDON, April 26, 1879.

Messrs. Editors: — Even great London, with its stirring millions, its thousands distressed, diseased and halt and lame, fails to furnish much, or even anything, other than the common ills flesh is heir to. The question how best to relieve these ills, is here answered in terms so often heard and hence so familiar that one almost doubts whether his feet are not resting upon the New World. Of course individualities are seen here and there, in these men and in the things they do, even to the care shown the afflicted under their charge; still, it is mostly an oft-repeated story. Living encyclopædias of the pathological, etiological and symptomatological in the history of every disease and injury, it yet rather surprises one that few, very few, positive assertions come from these men. They seem to be troubled with doubts, although filled to overflowing; yet more is wanted and sought after. Things go contrariwise so often; happenings fail to bear out suppositions in provokingly high ratios. Chaff is more plenty than wheat, in volume if not in weight and worth. Great richness of experience, the outgrowth of familiarity with multitudes of cases, fails to confer infallibility even on the most acute men, either as operators or diagnosticians. Operative blunderings and mistaken diagnoses are things not unheard of even 3,000 miles away from home, and certainly it is somewhat of a comfort to be able to think and say that as yet nothing has been seen that would induce me to speak in the least degree disparagingly of my countrymen on either score. High water mark measures no further up on the walls of stone here than it does

within rifle range of my own door. "Good cheer, brethren," be our motto. "*Toujours de l'Audacité!*" I believe the quotation is French; my proximity to that nation is ample excuse for its use, and besides, when written so, the motto is robbed of some of its boldness.

Some ten or twelve years ago, the late Professor Freer enunciated a principle of procedure in the formation of a gastric fistula in dogs for class experimentation, which he said must be carefully carried out in order that the operation might be successful. This important element of safety consisted in so doing the operation as to provide for firm and extensive adhesions between the stomach and abdominal walls, before any opening is made into the stomach itself. Prof. Freer always made application in his teachings of the same course of procedure, which ought to be carried out, he said, with minute care, in all operations of a like nature done upon the human body.

The operation for making a permanent opening into the stomach, called gastrostomy, done to prolong life and relieve the agony of patients suffering from closure of the œsophagus as the result of disease, or the mere opening of it for the removal of foreign bodies, is recommended as a proper surgical procedure, and has been done a number of times — still, to Mr. Howse, of Guy's Hospital, is certainly due the credit of demonstrating its absolute feasibility, comparative safety and evident necessity.

Mr. Howse considers that the uniformly successful result following his efforts so far is mainly due to the special method of procedure which he has followed in all his cases; this manner of operating accomplishes perfectly the very desideratum which Prof. Freer deemed so necessary and urgently advised. The first part of the operation is devoted to and done with the intention of securing a firm wide attachment of the stomach to the abdominal walls. This consists in fastening the two together by ligatures introduced in a special manner and leaving them so attached for five or six days, which is long enough, according to Mr. Howse's experience, to develop firm union; after which the stomach itself is opened. In none of these cases was there any undue inflammation or any other interference with the progress of the case to recovery. The fistula is completed by opening the

stomach through the lips of the abdomino-gastric junction — a proper gum elastic tube is introduced into the cavity of the viscus and retained there by strapping, and through this tube the patient can be fed without discomfort or trouble.

Mr. Howse naturally expresses the hope, encouraged as he is by his successes, following the operation, that this procedure will be earlier resorted to in the class of cases for which it is oftenest done — epithelioma of the œsophagus, and in addition that it will come to be looked upon as a necessary and accepted course of treatment in cases of traumatic occlusion or specific stricture. Up to the present time five operations have been done by him, four for closure of the œsophagus by epithelioma and one for traumatic stricture.

Of those done for epithelioma, one lived seven months after the operation and finally died from extension of the cancerous disease to surrounding vital organs. During this long period the patient was entirely free from the agonizing distress incidental to slow starvation — feeding herself comfortably and easily through the tube or external œsophagus. I might even justly say that the feeding was not robbed of enjoyment, for the patient masticated her food and then introduced it into the stomach through the tube. Two others, operated upon for the same disease, lived for weeks and months respectively, and died from epithelioma of the lungs, each deriving benefit from the operation. The fourth one died from renal coma a few days subsequent to the operation. In none of them was there the least discomfort arising from the operation, and the pathological specimens of each case, now preserved in the museum, demonstrate positively that in neither case was there any peritonitis developed from the interference, as is shown by the entire absence of any adhesions other than those sought for and obtained between the stomach and abdominal walls.

Through Mr. Howse's courtesy and kindness to me, I witnessed the operation in the fifth case, and have seen the patient several times during the several weeks following the operation, and can bear witness to the comfortable condition of the patient, the relief afforded her, and to the absolute absence of any local trouble from the wound. The patient had swallowed a quantity

of muriatic acid with suicidal intentions some months ago, and, as a consequence of this act, stricture of the œsophagus had gradually developed, defying and resenting all efforts at dilatation. Any such like attempts at relief were followed by severe bleeding and other bad signs, sufficient to make the efforts dangerous. Mr. Howse did the operation partly to avoid expected emaciation from inability to swallow, but mainly to put the parts above absolutely at rest for months, so that all granulating surfaces might become healed over and toleration of dilating instruments follow. If this result came about, well and good; if not, then the patient could live quite comfortably with the new mouth to her stomach — digestion, apparently, being very little affected by the new way of taking food. An oblique incision was made, about 9 Cm. long, parallel to the cartilaginous margin of the chest on the left side, in the epigastric region, far enough away from the cartilage to allow of room for the application of the outside row of stitches used to fasten the stomach to the abdominal walls, and carried down to the rectus abdominis muscle, the fibers of which were the landmark as to position. The under layer of its sheath is the indication of close proximity to the peritoneum. All bleeding vessels were controlled with catgut ligatures. The peritoneum was then carefully opened and the anterior wall of the stomach sought for. Mr. Howse gives three means of recognizing this organ. The mistake of opening the transverse colon has been made, but according to him such an accident should never happen. 1st, the walls of the stomach are much thicker than those of any intestine; 2d, the color is lighter, and there are no longitudinal fibers; 3d, the two layers of the omentum, passing from the stomach to the colon, can be easily recognized. Having reached the stomach, the next step is to stitch it to the abdominal walls, and in this consists the essential part of the operation, and this part must be carefully and accurately done. He employs two rows of sutures. The first introduced at intervals of 1 Cm. from each other all around the margin of the external wound, fully 3½ Cm. from that margin. The second joins the stomach to the edges of the incision, leaving about 1 Cm. of its surface exposed in the wound, as its edges are subsequently drawn together. In passing

all of the sutures into the walls of the stomach, great care is taken to prevent the needle entering the cavity of that organ. Great stress is laid upon this matter, for if they do enter, fatal peritonitis is quite sure to follow upon the escape of gas or other matters through even these slight wounds. With the greatest impunity and entire absence of any dread of doing harm, the stomach walls are grasped by the fingers at the points chosen for the introduction of the needle, and in this way the operator absolutely assures himself that only the peritoneal covering and a portion of the muscular coat is pierced by the needle or included in the ligature. Perhaps a quarter of an inch of tissue is taken up in the grasp of each suture. Of course the needle is first passed through the entire thickness of the abdominal walls at the proper distance from the edge of the entrance wound, then through the stomach with the care specified, then out through the external coverings of the body again, and finally the two ends are tied over a piece of catheter; to give breadth of contact between the two parts and to prevent puckering. All the sutures of the outer row were thus carefully introduced until the entire circuit of the external wound was made; cat-gut was used for these sutures. The edges of the external wound were then united to the stomach in the same careful manner, and finally the wound itself was closed almost entirely by sutures. A silver ligature was introduced into the walls of the stomach to indicate the point at which the knife should be introduced into it, to complete the fistula after sufficient time had elapsed, to be sure that the adhesions desired were sufficiently firm. In all the five cases operated upon, this final opening was safely made; the post mortem examination in those who died showing the union complete and perfect. The feeding tube is then introduced, and all is well. Mr. Howse is a firm believer in the benefits of Mr. Lister's antiseptic dressing, and carries out that method of treatment in all operations, and to its great aid gives the credit of the safety after this rather formidable operation. One of Mr. Howse's colleagues at Guy's, has done the operation twice; once for epithelioma, and once for syphilitic stricture. The first of these died in a few days from general prostration, the operation being done after the old plan, such as is followed in colotomy. The second was done

with all the care so earnestly insisted upon and followed out by Mr. Howse, and is now living comfortably with the fistula completely established, five months after the operation. So a great deal of credit must be accorded to the *method* of doing the operation.

Again, Mr. Howse is a skillful, very careful and exceedingly ready operator—absolutely sure of his anatomy in minutiæ—and in these happy possessions, we must recognize great elements of success. You will pardon me for alluding to another somewhat heroic procedure practiced by him in the treatment of omental hernia. A large number of successful cases has convinced him that the best plan of treatment is to cut down upon the protruding mass, and remove it. They always grow longer, predispose to the formation of intestinal hernia, are liable to become strangulated, are never safely controlled by a truss, have never given rise to any trouble when removed under the spray, and the cure is radical. The base is tied with carbolized silk and dropped after the mass is cut away. Two excellent reasons are given: 1st, it is perfectly safe; 2d, it is a sure cure.

Several cases of admirable cure of nævi have come under my notice following treatment by the astringent caustic sodium ethylate. This caustic is made by putting pieces of metallic sodium into a small quantity of absolute alcohol in a wide-necked dish until the bubbles of gas cease to rise, when we have a snow-like, semi-crystallized substance. To this is added about its own bulk of absolute alcohol again, and there results a brownish-colored fluid about like ordinary mucilage, which should be kept in a glass-stoppered bottle fitted with a glass rod for application. It is applied to the surface of the nævoid tissue once a week, or once a month, according as the resulting eschar falls. Its application is accompanied with very slight pain; the resulting cure is all that can be desired; scarcely any evidence of cicatrix or whitening following. Large venous nævi are successfully cured by Mr. Thomas Smith, of St. Bartholomew's, by introducing large strands of yarn, soaked in the per-cholride of iron, through the mass in all directions, by means of a good-sized needle, so that the iron will not be squeezed out of the yarn by the edges of the wound. The yarn is left in some days until free suppuration is

excited. By the way, I hope the gentleman last mentioned will forgive me for saying that he is the neatest and most expert operator in general surgery that I have seen in London.

There is at least one gentleman in London who does not believe in doing osteotomy for genu valgum; on the contrary, he thinks such interference uncalled for in children and very seldom necessary at any time of life. This is Mr. Brodhurst of the Royal Orthopedic Hospital, an authority on such questions whose statements are of great value. His first objection is based upon the fact that death has more than once followed as the result of the operation; second, that if no fatal result ensue, anchylosis and loss of joint does occur quite often; third, the deformity is, in many instances, scarcely benefited at all by this hazardous procedure; fourth, what is far more important, perfectly satifactory results and relief of deformity can be obtained in a much simpler way, namely: by subcutaneous division of the tendon of the biceps femoris muscle, and the external lateral ligament of the knee joint. This simple operation is to be followed by the use of side splints, so adapted as to keep the parts in line for a sufficient time. Mr. Brodhurst showed me a girl, 17 years of age, in whose case he adopted this plan of relieving excessive deformity from genu valgum, and the result was perfect in all respects.

He speaks confidently about his own method, and urgently advises against the major operation. There is no deformity incident to shortened tendons or contracted tissue of any kind, but what is relieved at this hospital, no matter what the original cause of the trouble. The skill in operating is unsurpassed, and the subsequent treatment remarkable only for the gentleness in application of restraining appliances. The universal splint is one made of tinned hoop-iron, about 1½ Cm. broad. It is perfectly pliable and can be moulded to any case of talipes, however misshapen; and upon it they rely to gradually bring the parts into proper position after division of tendons. No attempt at extension is made until after the wounds of tenotomy have entirely healed. Their rule is to divide everything that is tight. Varus is treated according to an invariable rule; first, bring the foot into line with the leg by division of the anterior and posterior tibial tendons with the plantar fascia if necessary. No more is done until

the cure of this part is secured, then the second part of the treatment is commenced by curing the equinus, after the usual method of dividing the tendo Achillis.

No one can avoid expressing wonder at the marvelous results of treatment in this hospital. I saw less blood from the division of several tendons in twenty different cases, than I have seen follow one case of cutting the tendo Achillis in many instances. The knife used is small in the blade, introduced close to the tendon and beneath it, and the cut made outwards. A probe-pointed knife is used only for the tibialis posticus tendon and the plantar fascia. So satisfactory are the results from the use of the splints above mentioned, they very seldom find it necessary to use special shoes for talipes—I might say never in young children.

I listened to a very valuable paper read before the Clinical Society of London one week ago, on amputation of the hip joint, the principal interest to me centering in the novel method adopted and used to control hæmorrhage. This new and truly novel method has been introduced lately by Mr. Davy. It is done by means of a wooden lever about 60 Cm. long, measuring 2½ Cm. in diameter at either end for 15 Cm. of the length; being only 2 Cm. in diameter for the remainder. It is turned perfectly smooth and is well polished, the ends being slightly rounded. It is introduced into the patient's rectum sufficiently far for the end to rest in the hollow opposite to the sacro-iliac synchondrosis, between the psoas muscles and the base of the sacrum, where it is made to rest upon the common iliac artery, controlling the blood current perfectly; so that not a drop of blood is lost, except while the pressure is relieved to secure the smaller arteries. It has been used four or five times successfully and without any apparent damage whatever. The pressure is made by elevating the outer end, using the anus as a fulcrum. The instrument or lever, is steadied by holding it against the opposite thigh.

I am reminded that this letter has approached the elements of a course of lectures on physiology, so far as the beginning and ending go. We began at the stomach and have concluded as above. That is long enough certainly if measured by feet.

C. T. PARKES.

ARTICLE XV.

LONDON, 15 HARLEY STREET, W., May 3, 1879.

To the Editor of the Chicago Medical Journal and Examiner:

SIR: My attention has been called to an article in your issue of March last, on "Emmet's Operation," by Dr. E. C. Dudley, in which occurs the following passage: "Either from absolute "ignorance, or from profound prejudice, or from a carelessness "which in the law would amount to malice, the most exhaustive "gynæcological works in England (Barnes), France (Leblond), "and Germany (Hegar, Kaltenbach, Schrœder) are absolutely "silent."

"Big words!" It is not my affair to inquire how far they may be justly applied to Leblond, Hegar, Kaltenbach and Schrœder. As to me they possibly might be applied, *if the allegation were only true* that I had been "absolutely silent" about "Emmet's operation." But as a matter of fact I have mentioned it, and with the unqualified respect which I entertain for one of the most able and illustrious of my American friends. At page 873, 2d edition, of my "Diseases of Women," 1878, I give a compendious summary of Emmet's operation, quoting the source (*American Journal of Obstetrics*, 1874), and I conclude with the following appreciation: "I can confirm the accuracy of Emmet's views. I have performed his operation with satisfactory results."

So, if there is "absolute ignorance" it is not mine; if there is "profound prejudice," it is not mine; and if there is "carelessness amounting to malice," it is not mine. It is possible that Dr. Dudley is misled by copying a similar impeachment made against me by Dr. Paul Mundé, in the *American Journal of Obstetrics*, instead of reading my book for himself? Dr. Mundé has since apologized to me for his error. Dr. Dudley will no doubt do the same. As I am entitled to damages I claim the right to fix the penalty. I condemn him to read my book, and caution him never again to accept statements at second hand. I am, sir, yours sincerely, ROBERT BARNES.

Domestic Correspondence.

ARTICLE XVI.

NEW YORK CITY, May 1879.

Messrs. Editors:—The question of what to do with our tenement-house population is becoming a serious one, both to sanitarians and economists. The five hundred thousand people who live here in these structures contribute to more than two-thirds of the city's mortality and a still larger per cent. of its crime. It would seem as though decency, morality and health diminished as the overcrowding of houses and homes increased. And not much can be expected when four families occupy a single room and the domestic life of each is limited by a chalk line. We have had a "Tenement-house Sunday" when the matter was discussed in all the pulpits, and this has been followed by a number of public meetings and the final organization of a company for building model tenement houses. The great difficulty lies in the small size of Manhattan Island. For no matter how model a tenement may be, it must be a many-storied one, and such can never be so good or effective as a number of small houses or cottages like those Philadelphia gives to her workmen. We are attempting these, however, also, and it is believed that they will be a financial success in spite of high rents. In addition to this, large model tenements are projected and some already built. The principal features of these are that each floor is separate and reached only by outside staircases, and that careful provision is made for light, air and the removal of garbage.

The County Medical Society has been in a state of mind recently over the abuses of medical charity. We have six large dispensaries in the city, and from thirty to forty smaller and more

or less special ones. These treat gratuitously about a fourth of the city's population, that is, from 250,000 to 300,000, in the course of the year. Of course a great many of these can well afford to pay the doctor and the younger and struggling members of the profession are thus directly injured. Yet the doctors are chiefly to blame for this after all. It is they who have encouraged the unnecessary multiplication of dispensaries; there is a constant struggling and wire-pulling for appointments among them, and a constant effort to increase the number of the patients in order to have an interesting service. While such things exist, while there are plenty of doctors ready to submit to any rules, however humiliating, for the sake of an appointment, it is idle to expect any radical reform. Indeed the trouble lies deeper than this. The profession is too over-crowded for healthy competition and the schools are grinding out more and more every year. We have nearly twenty-eight hundred physicians of one kind and another in the city, and besides the fact of superfluity, not more than a quarter are members of societies that could enforce discipline. We presume therefore that the county society after heating itself with a few evenings of debate will appoint a committee and the committee will report, and resolutions will be adopted and things will go on much as before.

We by no means wish, however, to give the opinion that things are in a desperately gloomy state. As far as appearances indicate the physician continues to earn his living and to live in harmony with his neighbors and brethren. And though a quarter of a million get their pills and parégoric free at the dispensaries, a few are left to call at the office on the usual terms. Besides it is probable that some amelioration at least of the present abuses can be obtained. There is a rich hospital here, the New York Hospital, which at the instigation of a homœopathic trustee, has offered publicly medical advice to any one on condition of the receipt of a modest monthly stipend, amounting to one dollar. This is a disgraceful prostitution of medical service, which it does not seem possible can continue in the face of the strong sentiment against it among all the members of the profession except those who are bribed to acquiesence by their hospital appointment. The plan of obliging every patient who can do so to pay a small sum for medicine and

prescription has been introduced quite generally into the dispensaries and is considered a success by most of the officers of those institutions. In London, where evils much like our own exist, the Provident Dispensary system is being tried to some extent. This consists in forming persons whose wages do not exceed $6 or $8 a week into a sort of Health Insurance Company. A small sum is paid every week into the general fund and in return the medical officers take care of the members when sick. Such societies are liable to abuses and all have not succeeded, but when carefully conducted they may be very efficient substitutes for or auxiliaries of the ordinary dispensary.

One of the wealthiest and best conducted of the city's hospitals is the Roosevelt. It has a magnificent endowment, is thoroughly built and perfectly managed by its superintendent, Dr. Paine. It is constructed to a certain extent on the pavilion plan, the wards occupying two long separate buildings, one for the medical and the other for surgical cases. The buildings are connected only by corridors. The antiseptic treatment was early introduced here and carried out in every detail by Dr. Weir, who is one of the very few surgeons if not the only one who does seem always to be mindful of the minutiæ. The results have been satisfactory here as in the other city hospitals. Not all the visiting surgeons use it uniformly, but when anything of especial importance is to be done it is noticeable that they consider it best to give the patient whatever additional chance it may furnish. Though abandoned for a time at the Woman's Hospital as I wrote in my last letter, it has now been resumed there. At Roosevelt it is now succeeding admirably in compound fractures. At first it was found that though the limb did pretty well, yet necrosis was very apt to occur. The plan was then adopted of first opening the wound, cleaning it thoroughly and sawing off any ragged ends of bones, the dressing being applied after this as usual. Since then necrosis has not occurred.

A remarkable illustration of what a Lister dressing may do occurred a short time ago. A boy was brought in with a severe lacerated wound of the scalp, extending transversely across the vertex, tearing up much of the scalp and nearly removing the left ear which hung only by a little skin and subcutaneous tissue. The

wound was dressed antiseptically and in two days it had all healed except of course the cartilaginous part of the ear which, however, subsequently gave no trouble. Instead of the carbolized gauze usually employed by Lister, jute is used, which has been soaked in a solution of benzine and carbolic acid. It is a little cheaper and more efficient than the gauze.

The gum bandage is being used very extensively; in synovitis, arthritis, in sprains and bruises it seems to act remarkably well. Its magical effect on old ulcers is not so prominent. The ordinary treatment for these is to first wash them off with carbolized water, 1 to 20, then cover them with cotton that has been soaked in a saturated solution of boracic acid; over this the gum bandage is applied. Under this treatment the ulcers soon fill up with granulations, but cicatrization is by no means rapid, and it seems to be thought by the staff that those who have secured such wonderful results with this bandage have mistaken granulation for cicatrization. Buck's extension is still the popular method here of treating fractures of the thigh, although at some of the other hospitals the double-inclined plane may be seen.

Roosevelt is one of the hospitals which seem to ignore the fact that such institutions are built not to cure the sick, but to furnish clinical material for professors and students. In spite of its excellent run of cases very little teaching is done over them, and students are rarely seen in the wards. Even a proposal of a New York pathologist to build a pathological laboratory there at his own expense, for study and teaching, was refused. The contributions of the hospital therefore to medical and surgical science come through its attending medical officers. It is well enough perhaps that there should be some hospitals that are almost purely humanitarian institutions.

ARTICLE XVII.

WASHINGTON, D. C., May 20, 1879.

Editors Chicago Medical Journal and Examiner—GENTN:—In your courteous reference to the *Index Medicus* in the last number of the JOURNAL, you extract from M. Petit's article in *l' Union Médicale* the names which he gives of 25 publications

not included in the list of journals, etc., published in the January number of the *Index*. By mentioning merely these supposed omissions I fear you inadvertently do injustice to M. Petit, whose criticism abounds in flattering commendation and generous welcome.

Of the 25 titles not included in our list of 816, I find that 14 were new journals, which had been ordered, but were not received when our January number was compiled. We included nothing in our list which was not actually in our power to index. Ten of these have been since received and indexed, four are yet to arrive. Six other titles belong to publications not within our plan, being 2 dental, 1 educational, and 3 devoted to natural sciences. It was a mistake to mention the *Deutches Archiv für Geschichte der Medicin*, as omitted; it will be found on page 9. Three others, irregular publications, are duly received and indexed, but are hardly to be classed as *current*. Of the remaining two, one is, I suspect, incorrectly described, reports being given for proceedings; the last, alas, was unknown to us. Very truly yours, ROBERT FLETCHER, M.D.

We publish Dr. Fletcher's note, given above, with a great deal of pleasure, and are glad of the opportunity thus afforded of adding a word of explanation. In the copy originally sent by us to the printers, we made a full abstract of M. Petit's remarks, including his really flattering encomium of the *Index Medicus*, which we conceive to be one of the most brilliant and valuable additions ever made to American periodical literature. We stated further, that the suggestions of M. Petit, which were evidently made with the kindest intention, had been without doubt, already considered by the efficient editors of the *Index*.

The whole "matter" of this "copy," in consequence of want of space, was cut down to a mere introduction and the list which followed. It will be remembered by our readers that the portion actually published, was in the form of a "filling," intended merely to complete the page upon which it appeared, hence the accident which may have given to our lines a color they never were intended to produce.

We repeat, that we are glad of the opportunity thus afforded of

expressing our estimate of the journal in question. It is certainly one of the most permanently valuable medical publications which appear in any language or in any country. It should be in the hands of every medical gentleman who aims to be a teacher, an author or an expert, and of every one who aims to become thoroughly familiar with the literature of any given medical subject. The *Index* deserves the generous support of the profession of all countries. ED.

HEMP SMOKING IN TETANUS. (*Indian Med. Gaz. Aug.* '78.) Mr. Khastagir has successfully treated five cases of traumatic tetanus under the effect of ganja (hemp) smoking. This remedy has long been known, but has fallen into disrepute owing to the use of the hemp by the stomach instead of by smoking, the insufficiency of the doses, and to its being used as an auxiliary to some more potent remedy, and its effects hence neglected. A pipe filled with about 1.0 of dried leaves is kept ever ready near the patient. On every reappearance of a spasm the patient is made to smoke till the leaves are burnt to ashes, on which the muscles of the body instantly relax, the patient shuts his eyes and seems to go to sleep. The pipe is again charged and the advent of the next spasm watched for. In this way the drug has been administered day and night. The longest time which the hemp took to cure was seven weeks, the shortest six days.

Proper attention must of course be given to nutrition and proper evacuation of the bowels. This method has the advantage of being, as it were, self-regulating; the attendant knows when enough has been given as well as when more is needed. It is, however, of course inapplicable for children. (*Practitioner.*)

CORYZA. (*Gazz. Med. Ital., Jan.* '79.) Dr. Rudolphi recommends the use of eucalyptus globulus for the rapid cure of acute coryza or "cold in the head." He has found, by numerous trials on himself and patients, that after chewing a few of the dried leaves and slowly swallowing the saliva, the affection is promptly relieved; often disappearing in the course of half an hour. The remedy is only useful in acute cases. (*Med. Record.*)

Reviews and Book Notices.

ARTICLE XVIII. — PRINCIPLES AND PRACTICE OF GYNÆCOLOGY, FOR THE USE OF STUDENTS AND PRACTITIONERS OF MEDICINE. In one large and very handsome octavo volume of 853 pages, with 130 illustrations. By Thomas Addis Emmet, Surgeon to the Woman's Hospital in the State of New York. Henry C. Lee, 1879.

Thirty years have scarcely passed away since one or two lectures on the diseases peculiar to women comprehended all that the most eminent teachers had to offer. But within these two or three decades various types of vaginal specula have appeared from week to week, with singular regularity. Many of these instruments, by spreading the fame or stimulating the pride of their inventors, rapidly fulfilled the essential part of their mission. It was with Sims' speculum and the lateral method of speculum examination that gynæcology received its great impulse. We are advocates of the opinion expressed in the second chapter of this book, that "in a single generation the use of this instrument has advanced the knowledge and treatment of the diseases, and especially the injuries of woman, from profound ignorance to a front rank, if indeed, not beyond that of any other branch of surgery." When the way had been opened by Sims' and other specula, for the more intelligent study of the reproductive organs of woman, a period of experiment followed and of this period modern gynæcology is the logical result. But respecting uterine pathology and theraputics the mass of the profession is yet in unstable equilibrium. The literature of the subject, pregnant with opinions and replete with promises, contains much that is uncrystallized and unsatisfactory. The enthusiasm of the

last generation has produced material in abundance, all of which is admirably compiled but not sifted. The profession of the whole world, therefore, has awaited with no ordinary anticipation and now receives with distinguished welcome, an author whose ability and experience qualify him to comprehend the subject in an original work containing what he knows, not what others have said. Such a work is now under review. A work almost as remarkable for the error which it omits or condemns as for the truth which it contains.

For many years the Woman's Hospital, in the State of New York, was the only institution of its special character in the world, and for this reason it afforded unparalleled advantages for continued observation of individual cases, and therefore for testing the merit of the many brilliant operations which had been introuced and which have marked the progress of this American specialty.

Dr. Emmet has been connected with this institution since its opening in 1854, and the history of his entire service includes a large majority of its patients and surgical operations. To these clinical advantages have been added those of his "private hospital and of an extensive consulting practice." His material, therefore, for original observation and generalization has been exceptional and unequaled. His previous literary contributions though not voluminous show ample evidence of honest and careful observation, of original, conservative and logical thought.

From the preface may be quoted the following detached sentences:

"This work is essentially a clinical digest. It includes the results of my individual experience and aims to represent the actual state of gynæcological science and art. * * * With the exception of two plates taken from Savage's work, and some of the instruments, all the illustrations are original, the drawings having been furnished by myself. In attempting to ascertain and formulate the laws which apply to disease and to analyze the results of treatment, I have compressed numerous histories into a number of statistical tables which present in brief space information that hundreds of pages would scarcely have sufficed to contain in detail. Their parallel, it is believed, is not to be found in the whole range of gynæcological literature.

Chapter I, on the Relations of Climate, Education and Social Conditions to Development, fully indorses the views of the late

Dr. Edward H. Clarke,* of Boston, and claims that the influence of our American climate, and our educational and social systems is "even more serious than he has represented." If this chapter be an exaggeration its error is certainly on the safe side.

Chapters II and III are given to a consideration of the instruments usually found in a complete gynæcological case, and are profusely illustrated by engravings. It is noticable that these instruments, with few exceptions, bear the name either of Emmet or Sims. To one or two paragraphs we invite special attention:

"As long as the sole use of the speculum was to bring the cervix into view and to facilitate the passage of the porte-caustique, in the treatment of a supposed ulceration, the cylindrical speculum sufficed. With the advance of knowledge in the treatment of uterine disease it became necessary to gain more space and light, and the cylindrical speculum has gradually been superceded by various instruments with expanding blades to open the upper portion of the vagina. * * * I have known both retroversion and prolapse to occur from repeated use of the valvular speculum, which had stretched the anterior wall of the vagina. The amount of light and space obtained by any of these instruments is very small compared with what is afforded by Sims', and they are useless for all surgical purposes. Full justice, in the light of our present knowledge, cannot be done in the treatment of uterine disease by any other instrument than this perineal retractor, or some other based upon the same principle and like it capable of exposing the whole vagina.

This chapter contains a description of the author's method of applying the vaginal tampon for uterine hæmorrhage, a method superior to all others.

Chapter IV: Physical Examination of the Female Pelvic Organs. Form for record of cases. The dangers of untimely and unskillful exploration of the uterus, especially when old or recent cellulitis be present are clearly indicated. Profoundly impressed with the importance of this caution, the author repeats it many times in the remaining chapters. The young practitioner and student will appreciate the minute and full directions here given for the accurate diagnosis of diseases. Simpson's sound is condemned as a dangerous instrument and the fine silver probe is substituted as safer and in the skillful hands more efficient.

*Sex in Education, or a fair chance for the Girls, Boston, 1873. The Building of a Brain, Boston, 1874.

Chapters V and VI are given to the Causes of Diseases Reflex and Direct and to the Principles of General Treatment. Chapters VII and VIII on Local Treatment deplore the lack of method which has always characterized the madness of good doctors in local applications to the uterus. We fully commend all that is said of the hot water vaginal douche, since in our own experience this agent alone has proved more useful than all other local treatment combined. The following is important:

"No plan of treatment could be more rational, or appeal more forcibly to the good judgment of every one. But, unfortunately from a neglect of details, it is rare that the slightest benefit is derived from the use of these injections, although so many years have elapsed since the profession has been fully informed as to their action."

The author then explains his own method of applying the douche and points out the causes of failure in others.

The actual cautery, the mineral acids, nitrate of silver and all escharotics are justly condemned as productive of more evil than good. The author says:

"If the so-called ulceration of the cervix be accepted as a cause and not an effect, the use of the caustic is consistent practice, and should be persevered in until the surface is healed.

But if it be held that the increased secretion is simply an attempt of nature to relieve an obstructed venous circulation, and that the erosion is a surface from which the epithelium has been washed away by the discharge constantly flowing over it, then such a course of treatment is to be deemed not only irrational but most hurtful. A whole generation of physicians has been misled by the delusion of *chronic inflammation and ulceration* of the uterus, conditions which no one has yet been able to demonstrate on the dead body."

We regret that these chapters on local treatment may not receive the attention which they merit from every man who holds contrary opinions. Before such a man makes another caustic application to the uterus it is his duty to weigh the evidence contained in this book and be convinced that the hard contracting scar surface which must be substituted for the epithelial membrane before the supposed ulcer can be removed is not productive of lasting evil. We are convinced of the soundness of Emmet's views, that the caustic always results in destruction of the mucous follicles and frequently in hypertrophy of the uterus and disordered innervation and circulation in the pelvis.

Injection of the uterine cavity is permitted and under certain conditions enjoined if the canal be prepared by previous dilation to admit free return of the injected fluid, otherwise it is condemned as a dangerous procedure. Dilatation of the canal by tents is a subject to which the author has evidently given much attention. He fully exposes the advantages of their use and the dangers of their abuse.

The author's conservatism is expressed in the following quotation:

"We should have the fear of cellulitis always before us, in the treatment of these diseases: as common as this complication is from cold and from other causes, it has its origin quite as frequently in carelessness on the part of the practitioner. We should never introduce the probe, a sponge tent, or an application within the uterine cavity, if the slightest indication of cellulitis can be detected. Nor should we attempt to correct a displacement of the uterus as long as any tenderness attributable to inflammatory origin can be detected by the finger. The female organs of generations have been mercifully endowed with a degree of tolerance to injury not possessed by the male, and woman is thus protected that she may be able to bear the perils of gestation. But few however of the many physicians who undertake to treat these diseases fully realize that there is naturally a limit to this immunity. No portion of the body has suffered more in consequence of incapacity on the part of members of the profession. * * * * * * * Under the guise of surgery the uterus has been subjected to a degree of malpractice, which would not have been tolerated by any other portion of the body; its cavity has been, and is still made the receptacle for agents so destructive that no conscientious man would employ them for the treatment of diseases in any other portion of the body without a full appreciation of his responsibility. But I trust that we have already passed the heroic age. * * *"

These two chapters are eminently conservative and satisfactory. They are full of precepts and suggestions of great practical value, and deserve not carelessly to be read, but profoundly to be studied. The practitioner who fortunately follows them will stand on a decided vantage ground.

Chapter IX, on Ovulation and Menstruation, contains fifteen exhaustive tables of statistics drawn from the author's extensive observation, and must furnish much new material for generalization and speculation. The author regards the physiology of menstruation as yet far from being fully settled, but respecting its relation to the uterine mucous membrane, believes with Tyler

Smith and others, that this membrane is disintegrated and thrown off at every period.

Chapter X treats of the Various Menstrual Irregularities, as symptoms, not as diseases. Disordered innervation and circulation and faulty nutrition of the uterus, are regarded in general as the immediate causes of painful menstruation. Mechanical dysmenorrhœa from flexions and other causes of obstruction in the uterine canal is thought to be very much less common than the popular opinion would indicate. Division of the cervix therefore is seldom advised, and the various forms of dilatation are to be invoked rather for the purpose of changing the condition of circulation in the endometrial membrane and the adjacent tissues than for the purpose of overcoming any obstruction to the passage of blood through the canal. We believe the author to be right in this matter, that the effect of dilatation upon the membrane is to hasten by pressure its periodical fatty degeneration and disintegration, thereby to relieve congestion by hastening the flow which may become established as soon as this membrane is cast off. We know of no other work which contains so much that is reliable and valuable on the subject of abnormal changes in the menstrual flow.

Chapter XI. Congenital Absence and Accidental Atresia of the Vagina; Mode of operating for Establishing the Canal and for Evacuating Retained Menstrual Blood.

Dr. Emmet completes the vaginal canal and gives free exit to all retained menstrual fluid in one operation and washes out the uterine cavity with warm carbolized water for the prevention of blood poisoning. He also employs the glass vaginal dilator of Sims in the artificial vagina until the process of healing is complete. His own success and that of others who have employed the same method has been exceptionally good. This chapter is well illustrated by wood cuts and contains a tabular statement of the author's experience of twenty-two cases.

Chapter XII, on Pelvic Hematocele, includes three engravings and a full history of the literature of the subject.

Chapter XIII. Diseases of the Pelvic Cellular Tissue. Dr. Emmet stands far in advance of the time in his appreciation of the relations of cellulitis to the diseases of women.

He says: "This disease is by far the most important one with which woman is afflicted. Many of the disappointments and bad results so often complained of in the management of diseases of women, in general practice, may be attributed to the existence of unrecognized cellulitis.

* * * * I am confident that the greatest advances yet to be made in this branch of surgery will be from the immediate study of the cellular tissue of the pelvis. We shall there find the key to many of the patological changes now treated as uterine disease. * * * * To illustrate, the circulation in a portion of the cellular tissue may become obstructed from some cause (such as cellulitis) with the effect of producing congestive hypertrophy of the uterus from partial stagnation. One of the first attempts of nature would be to relieve temporarily this condition by an increase of secretion from the mucous follicles. As this discharge continued to flow the epithelium would at length be lost, and what has hitherto been termed ulceration would be produced.

The statistical history of three hundred and three cases is given in a number of tables which present the subject in its great variety of relations. These tables, five in number, are among the most elaborate in the book.

Chapters XIV, XV, XVI, XVII, XVIII and *XIX* are mainly devoted to the various displacements of the uterus. Time and space forbid an adequate review of these chapters. They include numerous illustrations and a vast amount of statistical information. Division of the cervix for flexions, except in comparatively rare instances, intra-uterine stem pessaries, pessaries having external attachments, sponge pessaries and pessaries which press upon the anterior wall of the uterus are condemned as dangerous or useless.

The author's modification of Sims' operation for cystocele is the best ever devised, since it not only replaces the prolapsed anterior vaginal wall, but also causes the uterus to be held temporarily in position until perineal support can be gained by the restoration of the perineal body which is almost invariably wanting in such cases.

Chapter XX. Laceration of the Perineum. The author's original contributions on this subject are for the first time given to the profession in book form. His operation of perineorrhaphy in which the rectocele is used as material of which to form the new perineal body instead of making a separate operation for its removal, and his method of passing the sutures for the restoration of the sphincter ani muscle, may be regarded as perfect.

Chapter XXI. Inversion of the Uterus.

Chapter XXII. Subinvolution.

Chapters XXIII and XXIV. Laceration of the Cervix Uteri. These chapters are entirely original and exhaustive. They are destined to revolutionize the entire pathology and treatment of so-called hypertrophy, elongation and ulceration of the cervix. We are so impressed with the vast importance of this subject that we make the following somewhat lengthy quotation:

"As soon as the practitioner becomes able to recognize this condition under its different forms, he will be surprised to find a new explanation of all his cases of elongated or hypertrophied cervix as well as those of ulceration. Let him in all such cases simply make the attempt with a tenaculum in each hand to bring the points A and B (fig. 90) together at C, and a revelation will be opened to him. It will be necessary to employ Sims' speculum or some other instrument of the same kind, for otherwise the condition will not be detected. This I believe to be difficult with any valvular or cylindrical speculum, for these put the parts on the stretch. To this fact is doubtless due the difference of opinion which exists to-day as to the frequency of this injury. But let any one once master the diagnosis and he will not fail to recognize the protean nature of laceration and will never see another case of hypertrophied cervix or so-called elongated neck; moreover he will never have occasion afterward to amputate the cervix or any portion of it, except for malignant disease. This has been my experience during the past nine or ten years and in so large a practice, that, if hypertrophy and elongation existed I could not have failed to have recognized them. What observer has ever met with either of these conditions except after childbirth or abortion? * * * * I deny that such lesions exist. * * * * *I can but denounce amputation with scissors, knife or cautery of a so-called hypertrophy or elongation of the cervix as malpractice. I also deprecate as even more uncalled for the application of the cautery or caustics to heal a so-called ulceration on surfaces which can be readily united and brought into a healthy condition*" (by suture.)

Since the invention of Sims' speculum this is perhaps the greatest advance in gynæcology, both in the extent of its application, and in the beneficence in its results.

Chapter XXV. Amputation of the Cervix Uteri. The author declares that this operation is never called for except in malignant disease, and says that since he has appreciated the true pathology of what he once supposed to be hypertrophy and elongation, he has had no occasion to perform this operation for the relief of these conditions. The operation is characterized as productive of more unnecessary evil, and therefore as being to a greater extent a malpractice than any other procedure in uterine

surgery. We await with impatience the day when these views may become general.

Chapter XXVI. Cancer of the Uterus, Vagina, Rectum and External Organs of Generation. Considerable evidence is given which points to laceration of the cervix as an exciting cause of epithelioma. The recent observations of Breisky and Veit, in Germany, tend to corroborate this view.

Chapters XXVII, XXVIII and XXIX are given to the subject of *Fibrous Growths of the Uterus.* The history, etiology and diagnosis and general management are satisfactorily presented unless exception be taken to the author's estimate of ergot as a means of radical cure. He bases his opinions upon his own and the observations of Hilderbrandt, of Königsberg.

"From the injudicious use of ergot in large quantities, much harm has resulted. * * * * As a rule, great benefit follows its use when administered in small and continued doses * * * * with the view of exciting only moderate contraction. Ergot should never be given in large doses until after the uterine canal has been dilated and until it be found that the tumor projects sufficiently to warrant the belief that it may become pedunculated by uterine contraction. I have committed this error myself, and have likewise frequently observed it in the practice of others. Should a tumor be found buried in the uterine wall, or so situated that it cannot become pedunculated, large doses of ergot can certainly accomplish no good. But on the contrary, if the uterus be excited to violent contraction without a purpose as it were, an increased amount of blood will naturally flow to the parts, often with the direct effect of causing cellulitis and even peritonitis. * * * A favorable condition for increasing the growth of the tumor."

In direct contrast with the above, is the evidence presented in the memoirs of Dr. Wm. H. Byford, of this city, who reports a number of cases which he regarded as intramural, and which therefore could not be made to pedunculate by uterine contraction, but which appear to have sloughed away under the influence of large and continued doses of ergot.

In a future edition we should be glad to see the ergot treatment more fully considered. The questions are: *Were some of the fibroids reported by Dr. Byford intra-mural, as he believes, or only submucous? May the ergot be relied upon generally to expel or starve out intra-mural fibroids? How great are the dangers from cellulitis, peritonitis, and from the blood poisoning which must accompany a sloughing fibroid of the uterus?*

The most important of Dr. Emmet's contributions to this sub-

ject, is his method of removing submucous fibroids by traction. It is a matter of surprise and regret that so rational a procedure should not have received more attention from previous writers, since it was given to the profession in a memoir several years ago.

Chapter XXX. Diseases of the External Organs of Generation, Cervix and Uterine Canal. The author's ideas of the injurious effects of cicatricial tissue on the cervix resulting from severe caustic applications, or from any other cause, is worthy of more than passing attention. The curette forceps and the dull wire curette are substituted for the sharp curette, which is discarded as dangerous.

Chapters XXXI, XXXII and XXXIII. Vesico-Vaginal and Recto-Vaginal Fistula. No other book contains so much of value relative to vesico-vaginal and recto-vaginal fistula, not excepting the author's own work on vesico-vaginal fistula, published several years ago.

Chapter XXXIV. Diseases of the Urethra.

Chapter XXXV. Cystitis, Stone in the Bladder, and Ureters. The subjects of vesical and urethral disease are admirably and, in many respects, originally treated. It is shown that two or three per cent. of all cases in which forcible dilation of the female urethra is practiced, result in permanent incontinence of urine, and the operation is therefore totally condemned, and artificial vesico-vaginal fistula is substituted as entirely safe and in cystitis more satisfactory.

The eight remaining chapters, including about one hundred pages, are given to diseases of the ovaries, and to ovarian and abdominal tumors.

An essential feature of the book will be found in the marvelous amount of its statistic and tabular information which offers a wide field for speculation, for reflection and for classification of the laws of disease.

The literary execution of the work may not be quite up to the standard of its scientific excellence, but the author's meaning is generally clear and a spirit of candor pervades every page.

In novelty and utility its equal is not to be found in the medical and surgical history of America, or in the gynæcological history of the world. E. C. D.

ARTICLE XIX.—PARESIS OF THE SYMPATHETIC CENTERS FROM OVER EXCITATION BY HIGH SOLAR HEAT LONG CONTINUED AND SUDDENLY WITHDRAWN, ETC., SO-CALLED MALARIA, ITS ETIOLOGY, PATHOGENESIS, PATHOLOGY AND TREATMENT. By Chas. T. Reber, M.D. St. Louis: Geo. O. Rumbold & Co., 1879.

Moralists tell us all things have their use in this world, which all things must include books. The one now before us we imagine has already accomplished its mission. It has probably given pleasure to the author, work to the compositor, printer and binder; but any further service that it can contribute to the world lies beyond the ken of our short-sighted vision. Altogether it is 112 pages, and a very large part of it is made up of extracts. The rest is simply generalized statements and illogical assumptions.

In his chapter on "Animal Temperature," etc., the author makes the statement, "Some birds have a normal temperature of 112° F.," whereas Dr. E. Seguin, as far as we know, an authority on temperature, gives the maximum temperature of the guinea fowl and common duck, the highest temperature given by his tables, as 43.90° C. or 111° F.; only one degree less it is true, but "an inch is a great deal on the end of a man's nose." Then "Horses and cattle have a lower temperature than man." Looking again to E. Seguin's tables we find the French horse 36.80° C. or within .24° of 98° F., which our author gives as the normal human temperature; while the Arabian horse furnishes a temperature of 37.50° C. or 1.5° F. higher than the human normal of our author. The temperature of the ox is given by Dr. E. Seguin as identical with the Arabian horse, while the sheep varies from .23° C. lower to 3° higher than the Arabian horse. It is true the author's term "cattle" may embrace a wider field than the horse, ox and sheep, but it so happens that in the very extensive table of Dr. E. S. the French horse is the lowest tempered on the list.

We were favorably struck with the title of this book, but greatly disappointed on investigating its pages. We do not think it worth while to give a summation of the contents, for as we understand the object of review is to furnish subscribers some

idea of the nature of a work more definite than can be obtained from the title, etc., and we think that is better accomplished by exhibiting the way in which one idea is handled; for when impartially selected the old classical proverb, "from one you may judge the whole," is peculiarly applicable. The author closes his book with the magnanimous sneer at those who are diligently laborious in the cause of positive knowledge. We were about to say that there is nothing worthy of note in the book, but there is, the author would have us discard the word "*malaria*" and substitute it by the term "*hyper-therma.*"

R. T.

BOOKS AND PAMPHLETS RECEIVED.

A Clinical Treatise on Diseases of the Liver. By Dr. Fred. Theodore Frerichs. Translated by Chas. Murchison, M.D., F.R.C.P. Cl., pp. 228. 1879. New York: Wm. Wood & Co. Chicago: W. T. Keener.

Sixth Annual Report of State Board of Health of Michigan for Fiscal Year ending Sept. 30, 1878.

New Theory of the Great Physical Forces. By H. R. Rogers, M.D. 1878. Cl., pp. 107.

Essays in Surgical Anatomy and Surgery. By J. A. Wyeth, M.D. 1879. Cl., pp. 261. New York: Wm. Wood & Co. Chicago: Jansen, McClurg & Co.

A Practical Treatise on Surgical Diagnosis as a Manual for Practitioners and Students. By Ambrose L. Ranney, A.M., M.D. 1879. Cl., pp. 375. New York: Wm. Wood & Co. Chicago: W. T. Keener.

Chemistry; General, Medical and Pharmaceutical, including the Chemistry of the Pharmacopœia. A Manual on the Great Principles of the Sciences and their Application in Medicine and Pharmacy. By J. Anfield, M.A., PH.D. 1879. Leather, pp. 697. Philadelphia: H. C. Lea. Chicago: Jansen, McClurg & Co.

Paresis of the Sympathetic Centers from Over-Excitation by Solar Heat, Long Continued and Suddenly Withdrawn, etc. So-called Malaria; Its Etiology, Pathogenesis and Treatment. By Chas. T. Reber, M.D. 1879. Cl., pp. 112. St. Louis: Geo. Rumbold & Co.

Hints on the Obstetric Procedure. By W. B. Atkinson, A.M., M.D. Cl., pp 121. Phila.: D. G. Brinton.

A Treatise on Therapeutics, Comprising Materia Medica and Toxicology, with Special Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. Wood, Jr., M.D. Third edition, revised and enlarged. Cl., pp. 711. 1879. Phila.: J. B. Lippincott. Chicago: Jansen, McClurg & Co.

On the Diseases of the Abdomen, comprising those of the Stomach and Other Parts of the Alimentary Canal, Œsophagus, Cæcum, Intestines and Peritoneum. By S. O. Habershorn, M.D., Lond. With illustrations. Second American from Third English edition. Cl., pp. 554. 1879. Phila.: H. C. Lea. Chicago: Jansen, McClurg & Co.

Rhymes of Science: Wise and Otherwise. With illustrations. Cl., pp. 66. 1879. New York: Industrial Publication Co.

Spermatorrhœa: Its Causes, Symptoms, Results and Treatment. By Robert Bartholow, A.M., M.D. Fourth edition. Cl., pp. 178. New York: Wm. Wood & Co. Chicago: W. T. Keener.

A Guide to Therapeutics and Materia Medica. By Robert Farquharson, M.D. Second American edition. Revised by the Author. Adapted to the U. S. Pharmacopœia by F. Woodbury, M.D. Cl., pp. 498. 1879. Phila.: H. C. Lea. Chicago: Jansen, McClurg & Co.

Practical Instructions in Animal Magnetism. By J. P. F. Delouze. Translated by F. C. Hartshome. Cl., pp. 524. 1879. New York: S. R. Wells & Co.

Potts' Disease; its Pathology and Mechanical Treatment. With remarks on Rotary Lateral Curvature. By Newton M. Shaffer, M.D. Cl., pp. 82. 1879. New York: G. P. Putnam's Sons.

Demonstrations of Anatomy, being a Guide to the Knowledge of the Human Body by Dissection. By G. V. Ellis. From the 8th and revised edition. Leather, pp. 716. 1879. Phila.: H. C. Lea.

Minutes of the Medical Society of the County of New York, 1806-1878. Part I.

Transactions of the American Ophthalmological Society; 12th, 13th and 14th Annual Meetings.

Tenth Annual Report of the State Board of Health of Massachusetts. Jan., 1879.

On the Permanent Removal of Hair by Electrolysis. By Geo. H. Fox, M.D. Reprint from *Medical Record*, March 22, 1879.

The Therapeutical Society of New York. Reprint from *New York Medical Journal*, April, 1879.

The Difficulties and Dangers of Battey's Operation. By Geo. J. Englemann. Reprint from Transactions of American Medical Association.

An Address upon the Life and Character of Lunsford Pitts Yandell, M.D. By Richard O. Cowling, A.M., M.D.

National Board of Health Circular No. 3.

Yellow Fever: Its Origin and Relation to Other Malarial Fevers. By J. G. Westmoreland, M.D. Reprint from Transactions of Medical Associations of Georgia.

Iritis and Some of its Dangers. By S. J. Jones, A.M., M.D. Reprint from Transactions of Illinois State Medical Society. 1877.

Affections of the Lachrymal Apparatus. By S. J. Jones, A.M., M.D. Reprint from Ill. State Medical Society, May, 1878.

The Present State of Otology. By S. J. Jones, A.M., M.D. Rep. from Ill. State Med. Soc., 1878.

Osteotomy for Deformity of the Legs. By Chas. T. Poore. Rep. from *Med. Record*, April 26, 1879.

Inhalations in the Treatment of Pulmonary Diseases. By F. H. Davis, M.D. Reprint from *Detroit Lancet*, May, 1879.

Urethrismus or Chronic Spasmodic Stricture. By F. N. Otis, M.D. Reprint from *Hospital Gazette*, April 19, 1879.

Circulars of Information of the Bureau of Education, No. 1, 1879: Training Schools for Nurses.

Reports with Analysis on the Apollinaris Spring, Neuenahr, Rhenish Prussia, 1878.

National Board of Health Organization, etc.

Transactions of the State Medical Society of Arkansas; its Second Annual Session.

A Treatise on the Horse and Its Diseases. By J. B. Kendall, M.D.

TETANUS CURED BY NERVE STRETCHING. (*Cincinnati Lancet and Clinic, Jan.* 18.) Dr. Ransohoff reports the first *successful* case in this country of nerve stretching for tetanus. The patient, æt. 13, received a trivial injury to the foot from a piece of rusty iron. Tetanic symptoms appeared on the eighth day. On the twelfth day the posterior tibial nerve was well stretched, and from this time the symptoms improved and the patient was finally discharged cured. Of the five previous cases in which the operation has been resorted to for traumatic tetanus, three were by Prof. Vogt, with two successes, one by Verneuil, successful, and one partial success by Dr. Drake, of Canada.

Obituary.

JOHN MAYNARD WOODWORTH.

IN MEMORIAM.—The death of Surgeon General Woodworth has caused a profound feeling of sorrow wherever he was known, and especially in Government official circles. Notice of his death was officially promulgated by the Treasury Department as follows:

TREASURY DEPARTMENT, Washington, March 14, 1879.

To the Medical Officers of the U. S. Marine-Hospital Service:

It is my painful duty to announce to the Medical Officers of the Marine Hospital Service, the death of Surgeon-General John M. Woodworth, which occurred in this city March 14th, 1879.

Surgeon-General Woodworth was born in Chemung Co., New York, August 15th, 1837. He entered the service of the United States as an Acting Assistant Surgeon of the Army in 1862, was soon after appointed Assistant Surgeon of Volunteers, and in 1863 promoted to Surgeon, and afterward to Medical Inspector and Medical Director of the Army of the Tennessee. He was previous to his leaving the Army brevetted Lieutenant-Colonel. His connection with the Marine-Hospital Service dates from its reorganization in 1871, and the history of the Service since that date is mainly identified with his own, for the work of reorganization has been solely intrusted to him since its commencement. As a mark of respect to the memory of so distinguished an officer, whose fame as a sanitarian was not only national but world-wide, the flags of all U. S. Marine Hospitals, will be displayed at half-mast on the day following the receipt of this order. Respectfully, (Signed) JOHN SHERMAN,

Secretary of the Treasury.

Dr. John M. Woodworth was born in Chemung Co., N. Y., Aug. 15th, 1837, and died March 14th, 1879. The year following his parents came to Illinois and settled on a farm near Kaneville, Kane Co. At the age of thirteen years he entered the Christian life which thereafter ever showed its impress upon all his acts both private and official. He went to Chicago when a young man and engaged in the drug business with his brother, who was a practicing physician. Being interested in scientific subjects, he became a member of the Chicago Academy of Sciences, and did a great deal of work toward putting it on a sound basis and increasing its usefulness. To this end, and at the instance of Robert Kennicott, the founder of the Academy, he spent a year at the Smithsonian Institution at Washington with Profs. Henry and Baird, securing duplicates for the Academy. After returning he took up the study of medicine, graduating from the Chicago Medical College in the spring of 1862. Immediately following his graduation he received an appointment as Acting Assistant Surgeon at Camp Douglas, and soon thereafter was appointed Assistant Surgeon of the First Illinois Light Artillery, and assigned to batteries A and B, recruiting in Chicago. He was subsequently promoted to the rank of Surgeon, and appointed Medical Inspector of the Fifteenth Army Corps, commanded by Gen. Logan. At the close of the war he had attained the position of Medical Director of the Army of the Tennessee, with the rank of Brevet Lieutenant-Colonel in recognition of efficient service. Before resuming practice, he went to Europe with Dr. E. O. F. Roler, of Chicago, and remained abroad a year, traveling and studying. On his return he formed a partnership with the venerable Dr. Ira Hatch, of Chicago, and entered active practice. In 1867 he was chosen Professor of Comparative Anatomy by the Faculty of the University of Chicago, and afterwards was appointed Professor of Physiology at the Chicago Medical College. At the same time he held the position of Surgeon of the Soldiers' Home and Examining Surgeon of the Pension Service. These positions he continued to fill until, on the passage of the act reorganizing the Marine Hospital Service, in 1871, he received the appointment of chief of the newly-created bureau, the duties of which office

called him to Washington, where he has since resided. It is in this latter position that he has done his most important work. Within the necessary limits of this sketch it would be impossible to give any adequate idea of the amount and character of the labor involved, not only in correcting the abuses which had grown up under the previous no-system of furnishing relief to sick sailors, but in carrying into effect the provisions of an act which, on its face, was crude and vague to a perplexing degree. Dr. Woodworth labored incessantly and unsparingly, both of himself and others, to remedy these defects; and so successfully that his untimely demise cannot affect the permanency of the service he has rendered. His fitting monument is in the compact, efficient, economical organization he has left behind him which supplies medical and surgical relief to over 40,000 sailors, composing our commercial navy.

He has left his impress on hospital construction and administration; the Marine Hospital at Lake View, a model of the best of the old style, and that at San Francisco, embodying the improvements and reform of the modern styles.

He was complimented in general orders for his energy in the establishment of field hospitals during the Atlanta campaign, and again, in the subsequent campaign, for his moving ambulance hospital, which carried one hundred wounded men from Atlanta to Savannah, and placed them in hospital there without the loss of a single life, although a number of important operations had to be performed by the way. His principal scientific works and papers are: the "Mystery of Life," published in 1871: "Regulations of the United States Hospital Marine Service," 1873; "Cholera in 1873 in the United States;" "Migrants and Sailors in their Relation to Public Health;" "Safety of Ships and those who travel in Them," and "Quarantine with Reference to Yellow Fever." His work on the "Nomenclature of Diseases," 1874, is the standard reference of the Marine Hospital Service.

With his work in connection with epidemic diseases—notably in connection with the cholera epidemic of 1873, and the yellow fever epidemic of 1878—both the medical profession and the public are well informed. The bulletins from his office, collating the facts of the public health in almost all civilized countries, are

rapidly acquiring a value similar to the weather bulletins of the Signal Service. It is hoped that a fitting successor has been found to carry to completion the efforts he has inaugurated in this and other directions.

Dr. Woodworth married Miss Maggie Hannah of Chicago, in 1873, and his family is connected with many of the oldest citizens of our city.

A little time before his death he became conscious. Then he dictated some important letters; sent telegrams to Mobile and New Orleans in relation to the formation of Boards of Public Health; also gave directions about a $500 check, which he had for the yellow fever fund. Vice President Wheeler asked him if he was ready to go. He said "I am ready." That Christ had died for him. Then placing his hand upon his breast said Christ was there, and to his friends farewell forever. The unconscious state soon returned, and in a few hours he sank peacefully away, as in a quiet slumber.

The funeral services of Dr. Woodworth were held in Washington on the 16th, and the body was laid away in the beautiful Rock Creek Cemetery. The funeral, which was an imposing one, was managed by the Treasury Department. Five Bureau officers—Genl. Raum, Commissioner of Internal Revenue; Mr. Burchard, Director of the Mint; Gen. Schofield, Register of the Treasury; Col. Irish, Superintendent of the Bureau of Engraving and Printing; and Judge Carter, First Comptroller of the Treasury—acted as pall-bearers.

The President, Secretary Sherman, Assistant Secretary Hawley, Senator Logan, and a great concourse of persons in private and official life attended. The services were conducted by Drs. Cuthbert, of the First Baptist Church, Paxton, of the N. Y. Avenue Presbyterian Church, Rankin, of the Congregational Church, and Rev. C. K. Marshall, of Vicksburg, Mississippi. The floral offerings, which were of the choicest flowers, were most beautiful. A large crown surmounted by a cross of immortelles and violets; a cross and anchor were sent by Mrs. Hayes. Secretary Sherman sent a cross, and the employes of Dr. Woodworth's office sent an anchor which was surrounded by a fine floral wreath.

A special meeting of the executive committee of the Yellow Fever National Relief Commission was held Saturday evening, March 15th, at Willard's Hotel to take action relative to the death of Surgeon-General Woodworth. There were present ex-Governor Shepherd (chairman), Lewis J. Davis, Simon Wolf, George Hill, jr., A. S. Solomons, John F. Cook, ex-Senator Pease, Col. McArdle, Captain Lake, and Rev. C. K. Marshall, of Mississippi, and William Dickson, secretary.

Ex-Governor Shepherd announced the object for which the meeting was called, and referred to the valuable services of the deceased as a member of the Commission.

Simon Wolf, Esq., presented the following resolutions, which were adopted:—

The Yellow Fever National Relief Commission having learned with profound regret, of the sudden death of their distinguished colleague, John M. Woodworth, and being desirous to fittingly express its sorrow, resolves that,

WHEREAS, John M. Woodworth, Surgeon-General, of the Marine Hospital Service, and a member of this Commission, has been taken from our midst, and

WHEREAS, we, the members of the Commission, desires to honor his great work, integrity, and nobility of character and devotion to duty, therefore,

Resolved, That in the death of John M. Woodworth science has lost an eminent disciple, humanity an earnest laborer, and the United States Government an active, indefatigable, and zealous official.

Resolved, That as an associate he was gentlemanly, courteous, self-sacrificing, and gave the fullest measure of his ability and influence to the success of the aims and objects of this Commission, and that he fell a soldier in the sacred cause of humanity, his large heart and brain being enlisted in the promotion of such legislation as would nationalize sanitary science, and prevent the introduction and spread of contagious diseases.

Resolved, That we tender to his widow our profound sympathy and respect, and that the name and memory of John M. Woodworth will ever be held in high esteem as a benefactor of his race.

Resolved, That this Commission attend his funeral in a body, and that a copy of these resolutions be transmitted to his bereaved family, and published in the daily papers of this city.

Colonel McArdle, of Mississippi, delivered a beautiful and eloquent tribute to the memory of the diseased, and as a representative of the section stricken by the pestilence last summer, related in detail the philanthropic and noble services rendered by Dr. Woodworth to aid his people, who would mourn in sadness the death of their stranger benefactor. The Rev. C. K. Marshall also spoke in fitting terms of the deceased.

At a meeting of the principal officers of the Treasury Department, held at the rooms of the Secretary, on the fourteenth day of March, 1879, the following named gentlemen were appointed to prepare resolutions expressive of their appreciation of the character and services of Dr. John M. Woodworth, Supervising Surgeon General of the Marine Hospital Service, whose death had been announced, and their sympathy with the family of the deceased, and to make arrangements to attend the funeral: Mr. French, Assistant Secretary; Mr. Raum, Commissioner of Internal Revenue; Mr. Porter, First Comptroller; Mr. Burchard, Director of the Mint; Mr. Johnson, Commissioner of Customs.

At an adjourned meeting, on the fifteenth day of March, 1879, said committee reported the following resolutions, which were adopted:

The death of one whose life has been filled with good deeds, often does not excite that sense of loss which is necessary to create completeness of sorrow. His good deeds so fill the memory that he seems yet to survive in them, and being dead he yet seems to live. The life of a great physician is a perpetual benefaction. He appears to live for others rather than himself. Dr. John M. Woodworth, whose death we now lament, led a strenuous life, highly devoted to duty.

Beginning as a pharmacist, dependent for a livelihood upon his own faculties, his aspiring nature instinctively sought a broader and higher field of exertion. He engaged zealously in medical studies, graduated as a doctor of medicine, and being by nature earnest and resolute, immediately started on a career of professional distinction. He sought intercourse with eminent minds,

and as he was zealous to receive, so, happily, he was zealous to impart knowledge. At an early age he won attention by the productions of his pen, and was sought as a member of various learned societies.

Entering the army as an assistant post surgeon, the force of his merit raised him successively from step to step in promotion, until at the age of 27 he had risen to be medical director and inspector of the army of the Tennessee. He received a brevet in token of highly meritorious service in Sherman's great march to the sea.

When the war closed, though his learning and experience were large, his aspiration for greater knowledge could not be held in check. He visited Europe, studying in the hospitals of Berlin and Vienna, and devoting himself with unremitting assiduity, until his savings were exhausted, to exploring the wider fields of professional knowledge. It was not long after his return until he was invited to take the honorable post at which he has fallen, and which he has magnified by his learning and administrative ability, and organized to be an instrument of great and enduring usefulness. When the yellow fever broke out last summer, and ravaged so great a part of the South, his soul was touched by the manifold recitals of sufferings and sorrow, and he burned with an inextinguishable ardor to make his office an efficient means to vanquish the disease then, and to prevent its return thereafter.

He was quick, when the horrid specter of the Asiatic plague rose in the East, to begin to study of the origin and progress of that malady, and to devise methods by which its access to our own shores might be prevented, and if all precautions failed, its ravages might be mitigated and diminished. In the pursuit of these investigations, and in the organization of his office to meet the great emergencies which it might be invoked to confront, he literally allowed himself no rest. The hours of each day seemed too brief for the tasks that crowded upon it. Though he felt the sense of overwork and exhaustion, labor to him was pleasure, because duty, as he thought, invoked him to it.

His manner was modest and unobtrusive, and in domestic life singularly sweet, but his spirit was heroic. In the presence of a great duty, demanding high exertions, health and life were held

of no account, success must be attained; he did not pause to think whether he might enjoy a part of its fruition. When just before his death he awoke for a moment to consciousness, he asked, "Where am I to lie?" And when told where his remains would be consigned to repose, a smile of satisfaction irradiated his features and the avenues to the world were then closed forever. No soldier in the field, dying in a good cause, ever offered up his life more disinterestedly than he has done in sacrificing his own in devising means for saving the lives of others.

With this estimate of the life and character of our departed friend, it is

Resolved, That we lament the death of one whose life gave promise of such extended and continuing usefulness, and we tender to his devoted wife and to his kindred our sincere sympathy.

Resolved, That the heads of the various bureaus of this Department will in a body attend the funeral of Dr. Woodworth, tomorrow at Le Droit Park; that the proceedings be placed on the records of this Department; and that a copy of the preamble and resolutions be transmitted to the widow of the deceased, and furnished to the daily papers for publication.

HENRY F. FRENCH,
GREEN B. RAUM,
ALBERT G. PORTER,
H. C. BURCHARD,
W. C. JOHNSON,
Committee.

M. RANVIER has been lately devoting some attention to the study of the structure of the cornea, and on February 8th communicated the results to the Société de Biologie. According to him, the corpuscles of the cornea cannot be seen in the normal eye of a living animal; they only appear when the eye in question has been kept for some time in aqueous humor. If the cells of the cornea become visible under the influence of steam, this is due to imbibition by the membrane. The fibers of the cornea are very hygrometric. A bull's eye, if plunged into distilled water, will increase in diameter several times.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, June 2 and 16.
West Chicago Medical Society—Mondays, June 9 and 23.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.
Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Prof. Hyde; 3 p. m., Medical, by Dr. Bridge.
Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.
Rush Medical College—3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.
Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman.
Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.
Woman's Medical College—11 a. m., Ophthalmological, by Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.

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